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ADDRESSES.

HISTORICAL ADDRESS.

Read before the Lancaster City and County Medical Society, on the occasion of the celebration of its semi-centennial, Feb. 14, 1894.

BY J. L. ZIEGLER, A.M., M.D.
MOUNT JOY, PA.

Time—noiseless, ceaseless, swift-winged time, has brought us to the fiftieth anniversary of our existence as a Society. It seems but yesterday that the venerable Dr. Samuel Humes first occupied the honorable position of President of the Lancaster City and County Medical Society.

On Feb. 14, 1844, the Society was organized by the adoption of a constitution and by-laws and the election of officers. There had been several preliminary meetings of the city physicians held at the house of Dr. Eli Parry, the first of which was held Jan. 18, 1844, at which meeting a sketch of a constitution and by-laws was submitted and a call issued to the physicians of the county to assemble on Feb. 14, 1844. This, the first meeting, will be best understood by reading the minutes:

"At a meeting of the medical gentlemen of the city and county of Lancaster, held this day pursuant to notice in the public papers, the following gentlemen were present: Drs. Samuel Humes, F. A. Muhlenberg, A. M. Cassidy, P. Cassidy, C. L. Baker, J. Leonard, J. S. Clarkson, J. B. Stubbs, Henry Carpenter, W. B. Fahnestock, J. A. Ehler, M. R. Gryder, Ely Parry, F. S. Burrows, N. W. Sample, Jr., J. L. Atlee, D. Hayes Agnew, A. Bitner, G. B. Kerfoot, S. Duffield, Jno. Leaman and W. L. Atlee.

"Dr. Samuel Humes was called to the chair and Dr. W. L. Atlee appointed Secretary.

"The object of the meeting having been stated by Dr. Eli Parry, the prime mover of this Association, it was, on motion,

"*Resolved*, That the minutes of the proceedings of the city meetings be read for the edification of the country members.

"After reading the minutes it was, on the motion of Drs. Burrows and Muhlenberg,

"*Resolved*, That the constitution and by-laws be read, and that after their reading a joint committee of three members from the city and three from the county be appointed to take them into consideration and present them to the meeting in the afternoon for final adoption.

"Committee: Drs. J. L. Atlee, Burrows and Parry, of the city; and Drs. Stubbs, Duffield and Sample, Jr., of the country. The meeting then adjourned to meet at 2 o'clock P.M.

"At 2 o'clock P.M., the meeting being called to order, the minutes were read and adopted. Dr. H. E. Muhlenberg was present in addition to the gentlemen above named.

"The committee appointed in the morning presented the constitution and by-laws, which were considered by sections, and after some slight amendments the whole constitution and by-laws were, on motion of Drs. Parry and J. L. Atlee, adopted.

"On motion of Drs. J. L. Atlee and Parry:

Resolved, That a committee be appointed to nominate the officers recognized by the constitution.

"Committee: Drs. J. L. Atlee, Clarkson, Bitner, Duffield and Humes. After a short absence the committee reported the following nominations: For President, Samuel Humes, M.D.; Vice-Presidents, F. A. Muhlenberg, M.D., Samuel Duffield, M.D.; Recording Secretary, Henry Carpenter, M.D.; Corresponding Secretary, Washington L. Atlee, M.D.; Treasurer and Librarian, Eli Parry, M.D. On motion of Drs. Burrows and F. A. Muhlenberg:

"*Resolved*, That the nominations close.

"*Resolved*, That the gentlemen nominated be considered the officers of this Society until the stated meeting in January next.

"Dr. J. L. Atlee now nominated for membership the following gentlemen: Wm. E. Maxwell, M.D., Marietta; John Myers, M.D., Marietta; Jacob Glatz, M.D., Marietta; Richard E. Cochran, M.D., Columbia; Wm. S. McCorkle, M.D., Columbia; Geo. Moore, M.D., Columbia, who were elected.

"Letters signed H. Shoenfeld, M.D., and Daniel E. Shirk were received, read and ordered to be laid on the table.

"On motion of Drs. Parry and Carpenter:

"*Resolved*, That a committee be appointed to transcribe the preamble and constitution on parchment and present it to the Supreme Court for an act of incorporation.

"Committee: Drs. Parry, H. E. Muhlenberg and W. L. Atlee.

On motion of Drs. J. L. Atlee and F. A. Muhlenberg:

"*Resolved*, That a committee of three be appointed to make a selection of medical journals, which shall be subscribed for by the Librarian.

"Committee, Drs. J. L. Atlee, F. A. Muhlenberg and Burrows.

"On motion of Drs. Parry and Carpenter:

"*Resolved*, That the officers of the Society be authorized to procure such books as their duties require.

"On motion of Drs. Parry and Carpenter:

"*Resolved*, That a committee be appointed to procure a suitable room for the meetings of the Society.

"Committee, Drs. Parry, F. A. Muhlenberg and Humes.

"On motion, adjourned.

"SAMUEL HUMES, Chairman.

"WASHINGTON L. ATLEE, Secretary of meeting."

We point with pride to the distinguished originators of our Association, and we hold in grateful remembrance the men eminent in their profession whose labors shed a luster on our Society.

Of those whose names stand upon the records at its organization, all have gone to their rest with one exception, Dr. J. Augustus Ehler, who is still engaged in the active duties of the profession with such vigor

and energy, that were it not for the "flourishing almond tree" one could not realize the possibility of his participation in the organization of our Society.

The Lancaster City and County Medical Society, if not the first organized in the country, may be said to be the pioneer. It was the first to aim at the general organization of the medical fraternity of the country. It antedates both the National and our own State Society. Its members took an active part in their organization, and its principles are engrafted upon their government.

In 1848, fifty-nine physicians, representing twelve counties, including delegates from medical colleges, hospitals and local societies, met in our city of Lancaster and organized the Medical Society of the State of Pennsylvania. The Lancaster City and County Medical Society had nine representatives in this body, six of whom were participants in the organization of the Lancaster City and County Medical Society, which with a beginning of twenty-three members, has increased to ninety-five.

The State Society with a representation of 12 counties and 59 members has increased to a representation of 54 counties, embracing an enrolled membership of 2,500, with a representation of 500 delegates.

Our Society has been honored by the choice of six Presidents of the State Medical Society, and once by the highest honors of the profession, the President of the AMERICAN MEDICAL ASSOCIATION.

Your historian, forty-six years a member of the Lancaster City and County Medical Society, has a distinct recollection of all the originators of the Society, with many of whom he enjoys pleasant social and professional memories.

Dr. Samuel Humes, our first President—tall dignified and precise—"his lyart hafets wearin' thin and bare"—illustrious vestige of the old-time physician, eminent in council, widely known, highly respected, honored by the fifth reëlection as President of our Society, and the first President of the Medical Society of the State of Pennsylvania.

Dr. F. A. Muhlenberg, a man of fine physique, dignified and clerical in aspect, well stocked with scientific and medical lore, an accurate diagnostician, popular and often called upon in council, his presence gentle and soothing in the sick room, and paternal toward the younger members of the profession.

Dr. Francis S. Burrows, a graduate of Edinburgh, an Irishman "without guile," brimful of wit and good humor, the center of the social circle, a distinguished surgeon, kind, gentle and encouraging in the sick room.

Dr. John L. Atlee, whom all of you knew, whose presence gave such zest to our proceedings, whose energetic and active participation in everything pertaining to the profession he loved ended only at death, whose distinguished achievements and his elevation to the highest honors of the profession adds another star to the crown of our rejoicing. I can not forego the opportunity of again referring to his successful revival of the operation of ovariotomy under circumstances so unfavorable. When the opposition of the most distinguished surgeons was such that none but the bravest would dare to venture on such an untried field, yet in the face of such opposition, of contumely, and denunciation of pen and press as barbarous and cruel murder, he performed his first ovariotomy June 29, 1843, antedating the existence of our Society almost a year. The patient is still living in her eighty-third year.

Dr. Henry Carpenter, a descendant of physicians, the first and for many years the Secretary of our Society, a successful, extensive obstetrician, surgeon and general practitioner—with his cordial and social presence many of you are familiar.

I might mention many others, distinguished in the ranks of the profession, who retained their connection with our Society until their demise, but time does not permit, as a few of those who withdrew from the Society and sought other fields of labor demand a passing note.

Washington L. Atlee removed from Lancaster to Philadelphia, where he occupied the chair of Chemistry in the Pennsylvania Medical College. He became famous as a gynecologist and ovariotomist. He performed the operation more frequently than his brother, John L. Atlee, and in the beginning of his career shared with him the reproaches of those opposed to the operation. His first operation was performed March 29, 1844, nearly a year after his brother's first operation. The patient was Mrs. G. S. ——, residing near Mount Joy. His third operation was performed March 15, 1849, and was the first ovariotomy he performed under the influence of an anesthetic—a mixture of one part chloroform and two parts ether. He was noted for his kindness and affability. I shall ever remember with gratitude my first professional intercourse with him in the first year of my practice.

The name of Dr. D. Hayes Agnew stands out in bold relief among the galaxy of peerless exemplars. His eminence as a surgeon, a teacher, a writer and a Christian gentleman is so well and so extensively known that it needs no commendation. Our Society deems itself highly honored by having his name inscribed upon the roll of its membership.

Dr. John Leaman, after practicing medicine very extensively and successfully for a number of years, entered the ministry of the Presbyterian Church, and was also elected Professor of Anatomy and Physiology in Lafayette College, a position he faithfully and satisfactorily filled until his death.

Of the members of our Society who joined subsequent to its organization, and who have closed their earthly career, much might be said in remembrance of their labor and virtues, would time permit, but I can not refrain from the mention of one who was so recently in our midst, whose high attainments and whose presence added so much to the pleasure of our meetings, whose advice and counsel was so acceptable, whose interest in the welfare and progress of the profession was always sincere, as was his detestation of dishonorable practice and quackery—the father of physicians—Dr. Joshua M. Deaver.

But the old familiar faces greet us no more. The voice, hushed in death, no more is heard expressing the kindly welcome or the sage advice; their lifework is done. "And like one who wraps the drapery of his couch about him and lies down to pleasant dreams" they have passed away; their hopes and fears, their trials and triumphs, their deeds of love and charity will only be known when the Book of Life shall reveal the records of eternity.

> "There is no death; what seems so is transition;
> This life of mortal breath
> Is but a suburb of the life elysian
> Whose portal we call death."

How many changes have been wrought during this

half century, the changes of many colored life. Old landmarks have passed away; the landscape, ever changing, ever new, has been transformed, teeming with busy life, nature and art vying with each other to add new beauties to the scene. The lightning drawn from Heaven, becoming an obedient servant, has been made to transport us from place to place and light us on our way; made to carry our messages of love and sorrow, trade and triumph, success and failure, annihilating time and space. Days have been changed to hours, minutes to seconds.

The progress in the arts and sciences and every department of human industry has been unprecedented.

The mind is lost in wonder and amazement when comparing the present with the past. And yet our present advancement must not be attributed alone to the genius of the present generation. The agencies bringing about these results are but the outgrowth of the patient, and ofttimes unrequited, labors of those whose names are almost forgotten.

Lancaster County is second to none in the world's history for its influence on human progress. He who shortened the pathway of the ocean, brought the continents into closer proximity and revolutionized commerce, was born in Lancaster County. Robert Fulton, by his application of steam to navigation, did more towards the spread of the arts of civilization than any other agency. Though despised and derided in his first feeble attempt, to-day the rivers, lakes and oceans of the world teem with the evidences of his success.

So, too, in our own profession, Dr. A. Kuhn, an almost forgotten citizen of Columbia, who was elected Professor of Botany and Materia Medica in the University of Pennsylvania and one of the physicians of the Pennsylvania Hospital. It is said he was remarkable for his carefulness, precision and punctuality.

Dr. Benjamin Smith Barton was born in Lancaster—a distinguished medical teacher, writer and physician. He was early in life, chosen Professor of Botany and Materia Medica in the University of Pennsylvania, and after the death of the distinguished Dr. Rush he was appointed to the chair of Practice of Medicine. "Natural history and botany were his favorite studies, and in his investigations of these branches of science he made a conspicuous figure."

Dr. Jno. Eberle, a native of Lancaster County and a citizen of the village of Manheim, was a Professor of Materia Medica and Obstetrics in Jefferson Medical College, and a writer of distinguished merit. His treatise on "The Practice of Medicine" was considered at the time of its publication one of the most valuable works on this subject that was ever issued from the American or English press.

The labors of these distinguished men, with others in the profession, laid the foundation for the advent of a galaxy of bright stars in our professional world—whose names and influence were ever foremost in the advancement of the best interests of our profession, by advocating a wider and more thorough system of education, and by their labors in the organization of the profession, in commemoration of which we are this day assembled. One can not properly appreciate the immense advantage derived from the organization of the profession into county, State and National associations.

Just here allow me to digress, by reminding those who are not yet members of the National Association that it is their duty to show their appreciation of the labors of our predecessors by uniting their influence with the AMERICAN MEDICAL ASSOCIATION. This can so easily be done by simply sending the credentials of membership of the county society, together with the annual fee, to the treasurer; your name will be enrolled on the list of membership, and you will receive in return the weekly visits of the best medical journal published in the land.

Contemplate for a moment the character of the profession before medical societies existed. Then every man's hand was against his neighbor; envy, jealousy, fault-finding and traducing injured the whole profession in the estimation of the public. Now the science has been so much enlarged and advanced in the various departments, and so rapid is the progress, and it requires so close an application to study in order to keep abreast with the times that one finds little time to quarrel with his neighbor. At the same time these gatherings make us better acquainted with each other and round off the sharp corners of asperity, uniting us, and helping each other as brothers engaged in the arduous labors of a noble and honorable profession.

A retrospect of the history of our science for the past fifty years will bring to our attention a vast change and a permanent advance toward its establishment as a true science.

Then, anesthetics were unknown; now, the greatest boon ever conferred upon suffering humanity. Contemplate for a moment the courage required of a patient about to submit to some fearful operation, conscious of the agony to be endured while submitting the quivering flesh to the knife. Contrast this with the calm, happy and undisturbed oblivion of all pain, and you will realize the blessing conferred upon thousands daily who are compelled to submit to the surgeon's art.

The discovery of pathogenic microörganisms and their rôle in the production of disease is one of those triumphs of science which has enabled the surgeon to secure favorable results to an extent never thought of by our predecessors; and to the physician it is a field of wide extent and inestimable value; although much remains to be explored, yet the results already obtained demonstrate the possibilities in store for the careful observer and earnest worker in the domain of preventive medicine.

The microscope (which within the recollection of your historian was simply considered a philosophical toy) has thrown a flood of light upon this subject, for without it we would still be groping in the darkness of conjecture, and to it we owe the knowledge obtained by the bacteriologist; and I may add that it has become indispensable to the physician as an aid to diagnosis. What the microscope has revealed as the cause—asepsis and antisepsis—enables the surgeon to prevent or counteract.

The hypodermic syringe has enabled us to defy nausea, and almost instantly to relieve suffering, and it has removed all doubts concerning the effects of drugs upon the system.

By the aid of the thermometer in diagnosis we can be more certain of the character of disease, and be directed as to the nature of our remedies.

The laryngoscope and the ophthalmoscope have enabled us to inspect living organs, and the aid furnished by these instruments has qualified us to treat diseases with an exactness hitherto unattainable.

Indeed, there have been so many additions and

helps by instruments of precision that their mere enumeration would prove irksome. In the department of materia medica it is simply impossible to enumerate, in the time allotted to our subject, the changes and progress that have been made. There has been probably no greater advance in practical medicine than in antipyretic medication. Chemistry, especially organic chemistry, has added a long list of those substances derived from the hydrocarbon series, many of which possess decided antipyretic properties. A few only have been generally used, such as antipyrin-acetanilid and phenacetin—their number is so great, their composition so complex and their therapeutic application so undetermined that any further notice of them will readily be excused.

This progress in medical science we chiefly owe to the advancement made in the science of chemistry and physiology, and in which our predecessors exercised a conspicuous influence. The annals of our organizations bear testimony of their urgent demands for a wider field of scientific research and a more thorough training in professional studies. Fifty years ago, chemistry and physiology was a mere side show to the student of medicine; indeed, most of our medical colleges did not have a chair of physiology, and the lecture hour occupied by the professor of chemistry was generally devoted by the tired student to worship of Morpheus.

To-day, chemistry and physiology have become the chief corner stone of the science of medicine, and he who would rank as an educated physician must cultivate these sciences. In view of what has been said, and the many subjects of interest and profit necessarily omitted, we need not be surprised that the efforts made for a more thorough education and a more prolonged course of instruction are so urgently demanded by the profession; and as we have to a limited extent obtained legal protection we may, with brighter hope, look forward to the time when sectarian medicine with its pompous arrogance and ignorant self-conceit will be relegated to that oblivion to which it is justly entitled.

Let me say to those who have recently entered, and to those who are about to enter the profession, that by the general diffusion of knowledge and the impetus of our public system of education, the future generations will be much more competent to judge of your ability, and will demand a higher standard and a more thorough knowledge of your profession; although great has been the advance and rapid the accumulation of facts elicited by our modern appliances and agencies for the prosecution of research, so that the neophyte might think there is nothing left for him to do but simply follow in the footsteps of his predecessor. Let him not be deceived. We are only on the threshold of the temple of medical science, and the possibilities in store for the earnest worker will amaze the laggard and leave him stranded in the bogs of hesitancy and irresolution.

Let me urge our young men to arouse, and imitate our great predecessors in untiring application, earnest prosecution and unflinching determination. If Agnew or an Atlee had not possessed these qualifications we could not point to them to-day with the pride and rejoicing in the honor which their membership confers upon our Society.

It is upon the young men of to-day that the duty devolves of continuing this work so nobly pursued by the men whose memories we this day recall, and whose patient endurance has erected for them monuments that shall endure when the physician's art shall no longer be a necessity.

To the younger members of our Association we look for a continuance of the advances already made, the exploration of new fields and new agencies, for the amelioration of suffering humanity, for aid in extending and uniting in compact legions the co-workers in our noble profession; laying aside selfishness, jealousy and bickerings with an ardent desire and just emulation to excel in every good work, so that when our centennial shall have come, the historian may point with pride to a galaxy of brighter stars in the crown of their rejoicing.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

[From the WASHINGTON STAR, February 15.]

The celebration of the seventy-fifth anniversary of the Medical Society of the District of Columbia was marked by the delivery of several addresses which, inspired by the occasion, have more than a passing interest.

The President of the Society, Dr. Samuel C. Busey, in his address dwelt upon some of the notable facts in the history of the Society of which he is the honored head. He said:

"Inasmuch as the occasion which has brought us together tonight is one of those historic events which emphasize the permanency of this city as the capital of a great and powerful nation, and following so quickly the commemoration of the centennial anniversary of the laying of the corner stone of the Capitol, identifies the history of medicine with that of the city from its foundation to the present time, I will venture to recall your attention to such historic data as will establish the coincident relation of the medical profession in this city with its early history, development and present prosperous condition.

"On July 9, 1790, Congress passed and on the 16th of the same month Washington approved the Act 'establishing the temporary and permanent seat of the Government of the United States on the River Potomac.' In March, 1791, Washington issued a proclamation defining the limits of the new federal territory and directing the commissioners and engineer to proceed with the preparation of the plan of the Government city. On Sept. 18, 1793, the corner stone of the Capitol was laid by Washington, and on the first Monday of December, 1800, the Congress of the United States began its first session in the Capitol in this city.

THE EARLY PRACTITIONERS.

"When Drs. Samuel Brown and John Crocker settled here, 'the territory was inhabited by a few farmers, their servants, and, perhaps, some tradesmen and fishermen.' With the settlement of Frederick May, a native of Boston and a graduate of Harvard University, in 1795, medicine as a science had its beginning in the city of Washington. Others followed and in 1815 there were 'nine physicians and two practicing apothecaries.' The first associate assemblage of the physicians of this city took place in 1813, called by public advertisement 'to take suitable notice of the death of Dr. Benjamin Rush,' the

father of American medicine, and to appropriately commemorate his life and professional services.'

"Perhaps prior, but certainly during several years succeeding this date, the influx of charlatans and pretenders was so extraordinary, and such injuries and wrongs were perpetrated by them upon citizens, that the qualified physicians began to consider and discuss methods of procedure and organization by which the community could be protected from such wrongs and informed of the qualifications of those fitted to practice the healing art. Those efforts culminated in a petition to Congress in 1818, signed by twenty-one physicians, for the charter, which was granted, and approved by President Monroe on the 16th of February, 1819.

"We have invited you here tonight to unite with us in commemoration of that event. And, now that you know those noble founders were animated by the highest inspiration of Christian philanthropy and beneficence in the foundation of a medical society, which has lived through a period of seventy-five years, contemporaneous in history with the federal city and the Government, you will appreciate and honor the pride we take in giving expression to our praise and gratitude in memory of those noble men on this anniversary night. From 21 it has grown to an active resident membership of 214, of whom but two have passed the age of allotted life-time, and its senior in membership is a decade younger than it. I need not, then, tell you that in physical vigor and intellectual alertness it is now in the very prime of mature life.

DECREASE IN AVERAGE AGE.

"Such youth and vigorous manhood have not always characterized its membership. The average age has diminished with time and the increase of numbers. Among the honored dead twenty-seven lived beyond three score and ten, of whom six were founders; nineteen died at ages between 50 and 63 years, after the date of graduation, and seven held continuous membership in this Society for periods of fifty to sixty-three years.

"The average age of these venerable decedents was seventy-six and one-half years, the youngest of whom died at 70, in 1874, and the last at 89, in 1893.

In the primitive era of medicine in this city and during the early history of this Society the life of the general practitioner could not have been less arduous than since. Many of them began life when the practice of medicine was primitive and unremunerative in a community struggling with poverty in the development of a new city. It is true that the average lifetime of the medical is much less than that of either the legal or clerical professions, but this general law of vital statistics fails to explain the average youth of the present membership, which represents five of the eight decades of the life history of this Society. These data are somewhat phenomenal, and, perhaps, without special significance; nevertheless, they emphasize the fact that the pursuit of the art of healing is not conducive to longevity, and, while the average life of men in general is increasing, that of the medical profession is decreasing. With an average of forty-three and one-half years, and a prospective death rate of 57 per cent. under 65, the problem of life and longevity is of sufficient magnitude to command your attention. It will not do to ascribe this high death rate during the prime of life and manhood wholly to mental worry, sleepless time and inadequate remuneration, for these find compensation in the assured livelihood, conscious pleasure and consolation of duty well done. Whether referable to such esthetic or to graver consideration, the time has surely come when the causes of the comparatively low average life of men engaged in the science of saving and prolonging life should be intelligently and definitely ascertained. Those few, thirteen in all, who have reached and passed the age of highest death rate are equally sure of the inevitable, but can offer their juniors the consolation of their good wishes.

CONTINUED IN ONE FAMILY.

"The elder May came here in 1795, five years before the transfer of the Government to this city. He was a pioneer who prepared the way for others, and the founder through whose professional life the history of medicine in this city during the years antedating the organization of this Society can be traced through membership to and before the establishment of the Government here, and continuously with its growth and development down to the present time. His son, John Frederick, was born and began the practice of medicine in this city and died a member of this Society at the age of 80, leaving a son now an active resident member. In this family the continuity of membership has been unbroken from its organization to the completion of its seventy-fifth anniversary. This Society, then, claims a life-time beginning before the Government at Washington and coeval with the foundation of the city on the River Potomac.

"The Medical Society of the District of Columbia is the youngest of twelve medical societies in this country, now in existence, which have reached and passed the seventy-fifth year of continuous active life, and is the oldest, if not the first, scientific body chartered by an act of the Congress of the United States. Ten of its founders were natives of Maryland, four of Virginia, two of Massachusetts, two were born within the present limits of the District of Columbia and of three the nativities are unknown. In personal lineage it is confined to three of the original thirteen States, but as a scientific body it claims ancestral descent from eleven progenitors, who are present by representation with us tonight. It is, however, the natural and direct heir of the medico-chirurgical faculty of Maryland.

"With such an ancestry dating back to 1766, during the period of colonial discontent and strife; a foundation springing from the noble impulses of humanity and inspired by motives of high professional responsibility; fulfilling in its corporate capacity, throughout its long life, the charter declaration to promote and disseminate medical and surgical knowledge, and keeping abreast with the progress of science which has made medicine the handmaid of religion, do you wonder that the successors of those who gave birth to this Society, now living in a community representing the intelligence, civilization, progress and power of a nation of sixty-five millions of free people, should invite you to this reunion to tell you how faithfully they have kept the promise of its founders, and to unite with them in giving thanks and praise to that Providence which rules the universe?

THE GLORY OF THE PRESENT.

"The period comprising the years from 1819 to 1894 has been one of marvelous progress in science, literature, art and in all that pertains to Christian civilization. The village city, with its domain of farms, scattered homes, graphic streets and avenues, 'squares in morasses' and 'obelisks in trees,' has become the metropolis of a munificent nation, under whose supervision it has grown into a city surpassing in beauty and rivaling in attractiveness the more favored cities of both the old and new world, and holding together in one compact community a cosmopolitan population where education and culture need neither the blazonry of titular insignia, the heraldry of ancestral distinction nor the glamor of wealth to command position and influence.

"During the same period medicine, here and elsewhere, advancing along the lines of pathologic research and physiologic therapeutics, has escaped the era of hypothesis and speculation and now, as a science of precision and demonstration, commands the respect and homage of the civilized world. Now, as heretofore and everywhere, it is foremost in charity, unselfish in devotion to the welfare of public health, magnanimous under public and private wrongs and generous to a fault in unremunerative perils and responsibilities. But even this is not the full measure of its philanthropy. The mission of preventive medicine and sanitary science will not be attained until the causes of disease are eradicated and death is limited to the ailments to which flesh is necessarily heir and the process of natural waste and decay. How soon, if ever, this may be accomplished remains with the laity. Medicine will continue the pursuit with the zeal and courage of a science which seeks the welfare of mankind rather than place and fortune. The medical is the only profession, trade or occupation which seeks, by its progressive attainment of its ultimate object, the continuous decrease of emolument."

THE SENIOR TO THE JUNIOR.

"One of the most pleasing incidents of this occasion is the presence of representatives of the eleven ancestral societies, the oldest of which was organized in 1766 in the State of New Jersey. This exhibition of fraternity is an exemplification of that beneficent spirit which dominates the medical profession and makes kindred of us all. Honored colleagues who will follow me will tell you of its achievements in science and of its educational and charitable foundations. I have only to conclude with a few words addressed to my colleagues and juniors.

"It could not have occurred before, and can never occur again, that the senior member will be unanimously reëlected to the Presidency on the forty-fifth anniversary of his membership and preside at the seventy-fifth anniversary of this Society. Such a unique compliment can not be acknowledged in words which will completely and fittingly convey the gratitude I feel for such expression of personal and professional regard. At the centennial reunion some one of you will stand where I now stand, upon whom will devolve the duty which thrills me with pleasure to-night. In the enforced retirement which must come soon, I will cherish the hope that each one and all of you may live to celebrate the golden wedding day of professional life. And in communion with the Savior of man, who was first to heal the sick, the lame, the halt and the blind."

Dr. Busey stated that it gave him great pleasure to make the statement that he is indebted to Dr. J. M. Toner, a distinguished member of the Society, for many of the historical data cited in this address.

THE ADDRESS OF W. W. JOHNSTON, M. D.

The address of Dr. W. W. Johnston was an interesting and valuable sketch of the Society from its early origin down to the present. He said: "Twenty-five years ago the first anniversary of the Society was celebrated as we are celebrating the seventy-fifth now. Then, as now, the present was forgotten in the greater interest of the past, and the history of the origin and early progress of the organization was told with a fullness and detail which will make the address of Dr. J. M. Toner a valued record for all time to come. I wish that he were standing in my place to-night and that you were listening to the story of that olden time which he has made so full of freshness and of life. I feel more than an ordinary emotion in speaking of the anniversary oration of twenty-five years ago, when I remember that my father introduced Dr. Toner to the audience on that occasion, and that with unaffected pleasure born of a life-long devotion to the interest of the profession and the Society, he heard the story of early struggles in which he had borne his part, and ultimate triumph in which he so much rejoiced.

"It is peculiarly fitting on this night of jubilee that we should have as presiding officer the oldest and one of the most honored of our members, and that he should be, at the same time, one of the most active workers in the present as in the past, giving his constant presence and his aid to all that means progress. In our efforts now to make the past a living reality, we will be much aided by the thought that he has shaken hands with every President of the Society except the first two, Worthington and Sim. And if you will but take our President by the hand you will be reaching back and touching that time which we wish to bring as near us as possible in our felicitations to-night. That he may long live to extend his counsel to the coming years, that he may add many links to the chain which binds him to those far-off days, and that the distant future may yet be as his past, is, I am sure your sincere wish, as it is mine.

"I can not restrain my voice from associating with the President's on this anniversary the name of Lovejoy, who is the second oldest member on our list. His familiar face and figure form a part of my earliest recollections of the Society, and his conservative wisdom is stamped upon every judicial and ethical decision of the last thirty years. The Society delights to honor him and to thank him to-night for years of honorable and faithful service."

IN THE EARLY DAYS.

The speaker prefaced his story of the early origin of the Society by a graphic picture of the city in the early days of the present century, when a few scattered houses occupied the present site. "The founders of our Society," he said, "were active, hard working men, too, some of them; 'Sim, the second President of the Society, would start out in the morning on a bob-tailed horse,' the chronicler says, 'and visit twenty to thirty families during the day.' A sharp critic of the times avers that he gave but two medicines—calomel and Dover's powder—to all his pa-

tients, whatever the nature of their diseases." Entertaining sketches were given of Dr. Charles Worthington, the first President, and Dr. Frederick May, the third President.

Reference was made to the activity of the Society, in all matters pertaining to public health. Action in regard to vaccination was recorded in 1846. Cholera claimed the attention of the medical men of this city in 1832, when 459 deaths were caused by this disease. "With every year some question of importance affecting the health of the city has been the subject of animated discussion; sewerage, the drainage of the flats, the public abattoir, the ventilation of public buildings, the nature and prevention of prevailing fevers, and numberless questions of similar import have been discussed, to the great edification of the members and the benefit of the public.

"Mention can only be made of the effort to secure a permanent home for the Society, an effort abandoned in 1869, by the sale of what would have been a most valuable investment—the property at the southwest corner of F and 10th Streets. This result was due to the failure to secure the sustained coöperation of the members in its purchase,and the few enthusiastic supporters of the movement were not able to carry it through without the assistance of all. But that the Society was able to go as far as it did in 1868, with a membership of 140, promises well for the ultimate success of the project, which is delayed, not abandoned. The Medical Society is not a rich body, or we would have had a home of our own before this. The successive balances in the treasury were, in 1851, $10; 1854, $20; 1863, $83; 1873, $374; 1884, $516; 1893, $1,919. For the excellent administration of its finances the Society is indebted to its Treasurer, Dr. Franzoni.

"The Society record is not without its humor, although fun is not always intended. In March, 1873, the Society was invited to participate in the inaugural honors to President Grant, and to appear in the procession on foot, on horseback, or in carriages, as they might see fit. The picture of the staid members of our Society riding on prancing steeds along Pennsylvania Avenue, bedecked with bright scarfs, and the Society banner of Hygeia waving in advance, would, without doubt, have created a sensation, and added greatly to the beauty of the pageant. On May 16, 1866, the case of Dr. Gudgeon, a veterinary surgeon of great weight and prominence, was reported to the Society, the doctor having succumbed to excess of fat. This individual weighed at the time of his death upward of 500 pounds. I can remember him as one of the sights of Washington for many years.

THE ROMANCE OF LIEBERMANN.

"The history of the Society is not without its romance. If I could extract from the lives of our members all the moving stories and incidents of heroism, of dangers met and overcome, all the numberless acts of chivalrous valor, when there was no martial music to incite to bravery, but only the sense of duty and humanity, I could fill pages and volumes. I would like to tell the romance of one who was presiding officer at the anniversary twenty-five years ago, who was a member for forty-eight years, a doctor for fifty years, coming to Washington in 1840, and dying at the age of 74. The story was told me by word of mouth, and is told here as I heard it.

"Liebermann was a Russian, the son of a banker of Riga; his education was carefully conducted, and in time he was sent to the University of Dorpat. Here he shared in the political sentiment of the period, and, like most other Russian students, then and since, adopted the revolutionary doctrines to which his age, his hatred of oppression and his love of freedom attracted him. While pursuing his studies at the University the fire of revolution broke out in down-trodden Poland, and Liebermann, burning with revolutionary ardor, joined a band of students with the object of assisting this oppressed people. Armed with scythes, old muskets, and whatever weapons could be found, the students marched rapidly to the Polish frontier, and crossing it, advanced toward a town which afforded to their ardent courage, the opportunity wanted. With cries of triumph, waving their weapons in the air, they impetuously rushed through the gates, which seemed open to receive and welcome them. But once within, the gates were suddenly closed; they found themselves caught, trapped; the town was already in possession of the Russians, and the young patriots were prisoners. Liebermann was hurried into Russia and flung into prison, preparatory to being sent to Siberia. Here he gave himself up to despair; his life seemed ended, and he saw a banishment worse than death before him. He could not eat nor sleep. In the same prison was a Polish woman of rank, much older than Liebermann. She took pity upon his youth and misfortune, and did all she could to comfort him. One day, calling him to climb a ladder in the cell so as to command a view from a window of the courtyard in the prison, she pointed out to him, in the midst of a convoy of prisoners on their way to Siberia, a man dressed in rags, covered with dirt and chained to the axle of a wagon; he was crouching on the ground, eating with apparent relish, a piece of black bread.

"'That man,' she said, 'is a Polish nobleman of high rank. His misfortunes are greater than yours; he has lost everything, property, family and liberty; he is going to perpetual banishment, and yet he lives and endures. You are young; you may escape; you should be hopeful and brave.' This lesson had its effect, and from this time he bore his imprisonment with more content. It was not long before he received the happy news that through the solicitation of influential friends he would be granted permission to go to Berlin and study medicine, under surveillance. He went to Berlin, profited well by the excellent teaching there, and in time received his degree. A passport was then given him to return to Russia by one of three ways. He chose to go by way of Hamburg, to take ship there and thus have an opportunity to visit this important city.

COMES TO THIS COUNTRY.

"On reaching Hamburg he saw an American clipper ship just about to sail for America. The adventurous spirit was strong within him, and, having money, he determined suddenly to visit the land of liberty before returning home. This plan, which could not have been formed by any one not of strong and bold character, was carried out. After a month's voyage he reached Boston. The city was then in the throes of a presidential election, and Liebermann's description of his first impressions of the processions,

flags, firing of cannons, and general din and excitement, was very amusing. From Boston he thought he would visit New York, and once there he could not return to Europe without seeing the capital of the country. In Washington he received the visit of a Russian acquaintance, who, learning of his education under Laugenbeck, and of the new operation for strabismus (cross-eye), brought to him a big butcher, whose eyes were looking in every direction but the right one. Liebermann operated so successfully that another case of the same kind was soon sent to him, and so rapidly did his fame spread as a corrector of deformities of eyes and limbs by tenotomy, that in a little while, without the wish or effort, he found himself engaged in active surgical practice. His departure, deferred from day to day, was, in time, indefinitely postponed, and it was not long before his marriage, his growing popularity, and his new associations, made him a permanent citizen of Washington, and a member of this Society, to whose welfare he was devoted for nearly fifty years.

"His characteristics were strong self-reliance, readiness of resources, much surgical and operative skill, and industry and energy. His manner was brusque, but his heart was warm, and his friendships and affections firm and fixed. It was one of his peculiarities that he would never attend any one professionally who lived on the same block, or in his immediate neighborhood, and when one of his old patients moved opposite to his residence on 13th street, between E and F Streets, he positively refused to continue to be his physician. Up to the very last his strength of spirit triumphed over his weakness of the body, and an hour before his death he rose from his bed, tottered to a chair and signed an important paper. He died lamented; he will live in our hearts honored and loved."

HOSPITALS IN WASHINGTON.

BY J. FORD THOMPSON, M.D.

The history of the hospitals of the District of Columbia was given in an address by J. Ford Thompson, who prefaced the purely historical portion by saying that "nearly everything that has been done to give our profession the high position it to-day occupies in the estimation of appreciative minds, professional or non-professional, has been the outcome of hospital teaching, for it is there, and only there, that those crucial tests of accuracy in judgment which our calling requires can be properly applied and verified. It may be considered as particularly fortunate that, as a rule, no objections are made, as no hardships are entailed to this using of the indigent sick for scientific purposes, and they may have some consolation in the thought that, as some recompense to the community for the often liberal expenditure of time and money, they offer themselves as a means of advancing the science upon whose success their own welfare depends.

"It is to be lamented that, at least in our own country, there is often a lack of harmony and good feeling in the ranks of those whose interests can only be subserved by an intelligent administration and a high standard of excellence in all that concerns the welfare and success of our hospital government; and this friction is generally most pronounced, as it is most frequent, between the medical staff, individually, or as a whole, and the governing body, however it may be constituted; and it inevitably leads to a condition of things which has often retarded the growth and limited the sphere of usefulness of many an institution whose promise was as bright as charity could wish or science expect. Perhaps it is not always easy to place the responsibility for such misunderstanding, but it seems to be due in the great majority of cases to a misconception of the bounds and limits of the respective fields of duty and management of the two responsible bodies. I should say that encroachments are too often made upon strictly professional domain, and that its rights, at times, are ruthlessly infringed upon, and its dignity and self-respect assailed, without any justifiable or reasonable excuse for the action.

"It would seem to be apparent to minds of ordinary intelligence, as a self-evident necessity, that the medical boards should be fairly and sufficiently represented in the directing body, and that their opinions and counsels should be sought, and duly weighed in all questions involving the interests they have so largely in charge, and their advice should be unhesitatingly accepted upon many subjects, of which they alone are capable of passing judgment, such, for instance, as the choice of physicians to fill vacancies in the medical staff, selection of assistants and general supervision of internal arrangement and management, that can only be intelligently performed by men whose scientific training and knowledge fit them for the duty.

THE IDEAL HOSPITAL.

"The ideal hospital, and fortunately there are some such, to my mind is one which forms a part of one great whole of a thoroughly equipped medical college, of which the faculty should constitute the staff, all being under the control and supervision of a board of governors of the university, of which the college should be a branch. As the selection for faculty appointments is always made with great care and discrimination in order to procure the best available teaching material, the hospital would be, in the same way, provided with a corps of co-workers of unquestioned ability and fitness for clinical work, which is the highest and most exacting of our duties. In addition to this there would be the advantage of an unfailing supply of new life and energy in the young men who are now connected with all medical schools as special lecturers and teachers upon subjects to which they contemplate devoting their life work. They would be thoroughly trained to the duties of their new position and ever ready and willing to supplant their seniors whenever the exigencies required.

"A system with the main features resembling this, which has already proved the best, must eventually be adopted by all schools which hope to retain their reputation or existence, for all recognize the fact that hospital treatment is rapidly replacing the old method of didactic instruction, and every year we feel more and more the necessity pressing upon us of making provision for the new demands, and nowhere, perhaps, is this want more keenly felt than in our own city. But the difficulties to be encountered before such an arrangement can be accomplished to our satisfaction are unquestionably great, if not entirely beyond any probabilities that are now apparent.

"Those who are familiar with the great hospitals of Europe and America can compare their relative merits, and they must experience a feeling of national, as well as professional, pride at the rapid develop-

ment and present efficiency of many institutions in our largest cities. Indeed, it will be admitted that in construction, equipment and management they are unsurpassed by any others in the world, for which, almost without exception, thanks are due to the thoughtful generosity of private citizens. Such an one should be here in the capital of the nation, and a model of its kind in architectural proportions to harmonize with its palatial surroundings and rich in all the appliances and furnishings commensurate with the great nation's wealth and power."

Dr. Thompson remarked that it was evident to those who had examined the records that this was a very healthy community when this country was young, or that those in authority were sadly indifferent to the physical welfare of the resident population. It seems rather remarkable that here, at the seat of government and a rapidly growing city, there was no provision made for the care of the impoverished sick before the year 1844, except the few beds furnished by the old almshouse, on M Street northwest between 6th and 7th Streets. It is gratifying to know that the leading physicians and many prominent citizens were active and zealous for many years in their efforts to procure the necessary legislation for the establishment of such an institution as the city sorely needed, but their labors had been all in vain down to the date mentioned, when a sudden and accidental turn of fortune enabled them to carry out their design.

THE FIRST GENERAL HOSPITAL.

Congress was induced by a pressing necessity to make an appropriation of $10,000 for the conversion of an old jail in Judiciary Square into an insane asylum, but after the necessary changes were completed it was found unsuited, particularly on account of its central location, for the purposes intended; and it was at this propitious moment that the Medical Faculty of the Columbian University appealed to Congress for the transfer to them of the building for hospital and other purposes, which being granted, they opened to the public without delay, our first general hospital.

In the year 1861 the Government took possession of the building for the use of the army, shortly after which it was entirely destroyed by fire. "The decade from 1861 to 1871," he said, "was an era in our national history, rich in momentous events, whose influences were felt in every nook and corner of the land. Our city was the heart and center of the great struggle and the theater in which was enacted the drama of war, and in its performance the medical profession played a conspicuous rôle. Hospitals in great number and of great proportions were hastily erected in various parts of the city, and our medical men became intensely absorbed in the field of duty most congenial to their tastes and capabilities.

"But in the decade mentioned there is much that more nearly concerns us than the trials and glories of the past, for during that period were organized and established upon an enduring basis almost all the institutions that are now in active operation, whose histories are interesting, but must be briefly told. Providence, Columbia, Children's, Freedman's and the Emergency, all fall within the ten years, the Garfield appearing upon the scene a little later."

The speaker alluded to St. Elizabeth's or the Government Hospital for the Insane, as in magnitude and all that pertains to the welfare of the special class of patients, one of the model establishments of the world.

"Of those mentioned in the list," he said, "as of importance to the present generation, the Providence Hospital comes first as to time and is second to none in the position it has so long occupied in this community. Its origin was in 1862, and was due to the helpless condition, as regards civil hospitals, of the city after the loss of the Infirmary the year previous, there not being one to take its place or meet the emergency, which was most keenly felt. The Sisters of Charity, then in charge of St. Vincent's Asylum, taking advantage of the opportune moment, decided to open a general hospital of their own and lost no time in carrying out their design. They at first occupied the old Nicholson mansion on Capitol Hill for a couple of years, and then secured by purchase the present site, to which they soon afterward moved, after erecting a frame building to the east of the old three-story house which stood at the southeast corner of 2d and D Streets southeast. This ground, and much more than the original purchase, is now covered by the large and handsome building of the present time.

"I have not the time, I think my allowance is about already expired, to give here a detailed account of this Hospital or any others, for I am now struck by the truth of the remark of a friend, when I told him I was expected to give the histories of the hospitals of Washington in twenty minutes. 'Why,' he said, 'with your best team you couldn't drive around and look at them in that time.'

OUR HOSPITALS COMPARE FAVORABLY.

"I shall have to close with some remarks applicable to them all, although the genesis and development of each are well worth study as illustrating the kindliness of human nature and the untiring zeal ever manifested by our doctors for their permanent success. Without doubt the essential question is as to the amount and character of the work done as compared to that of other cities more favored, in some respects, than ours; and to meet this question authoritatively is certainly very difficult, for our early records, and, indeed, it may be said, our later ones also, are far from being satisfactory in detail and thoroughness, so that personal observation and opinion must be relied upon to a considerable extent in forming a judgment as to our relative standing, past and present.

"An experience, beginning with the old Infirmary and extending through all the hospitals of the city, with one exception, to the present time, with many opportunities of studying the methods and practice of those at a distance may be some excuse for the confidence with which the assertion is made that in every material respect and in all that concerns the true progress of medicine the work of our hospitals compares favorably with that of others, and quite abreast with the best in appreciation of the modern advances of science. It will scarcely be claimed by the most enthusiastic that their careers reveal much, if anything, in the epoch-making and record-breaking line, but they do show capability and conscientious performance of duty, which always come out well in the end.

"Claims are often made of priority in the introduction of some new operation or method of treat-

ment of disease, for some particular institution or member of its staff; but few, I think none, have been made here, at least none well substantiated, with the probable exception of that made for Dr. McWilliams, of having first used adhesive plaster many years ago at the Almshouse Hospital for making extension in fractures."

OUR MEDICAL COLLEGES.

The theme of address by Dr. Thomas C. Smith was "The History of the Medical Colleges of the District of Columbia." Beginning with the first organized of these institutions, the Columbian Medical College, which started in 1821, the speaker traced the history of the schools that have flourished in the District. At this time, he said, there is in successful operation in this city four medical schools. A brief history was given of the medical departments of Columbian, Georgetown, Howard and the National Universities.

"The Columbian Medical College," the speaker said, "has had its ups and downs. While its second course of lectures was in progress some physicians attempted to secure authority from Congress to open a medical school. They entirely ignored the existence of this College, and it was in evidence that their purpose was to cripple this, the only medical college in the District of Columbia. The faculty defeated the scheme. In 1840 the College was burnt out; in 1856 it nearly went out; in 1861 it was put out. In 1856 the lectures were suspended for the season because of lack of support, the dean having reported a balance of $8.25 to show for the winter's work. In 1866 the medical school moved into its present quarters, which had been provided through the generosity of Mr. W. W. Corcoran. Prosperity has been the order of the day since then."

"The medical department of the Georgetown University," the speaker said, "if the paradox be permitted, was born with a silver spoon in its mouth, and has held on to it ever since, for its progress and success have been uninterrupted. The organization of this splendid institution is due to Drs. Noble, Young, Johnson, Eliot, Flodoardo Howard and Charles H. Liebermann, who conceived the idea and developed the plan of organization. They met in Dr. Young's office, Oct. 25, 1849, and, after deliberation, resolved to establish a medical college in this city. And they did it, and it remains, and will remain, a monument of glory to their names while medical science is taught in the District of Columbia."

The first session was held in 1851, and of the first faculty only one remains, Dr. James W. H. Lovejoy, who is still doing service as a Professor and President of the Faculty.

"The Howard University was chartered," he stated, "by act of Congress, approved March 2, 1867. The lectures in the medical department commenced Nov. 5, 1868. Two students attended the first course of lectures; scores attend more recent courses. It was the first college here to adopt the three years' course of study, and has now, with other progressive schools of medicine, adopted the four years' plan.

"The National University is the junior medical school, and was opened in 1884. It has a corps of active, ambitious professors, who are doing good work." Dr. Smith then spoke of the character of the work done by medical schools and their influence upon the advancement of medical science.

THE ASSOCIATION OF DISEASES AND MORBID PROCESSES.

BY H. A. WEST, M.D.

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE IN THE UNIVERSITY OF TEXAS, GALVESTON; SECRETARY OF THE TEXAS STATE MEDICAL ASSOCIATION, ETC.

Any one who has had the opportunity of observation in the clinical wards or dead-house of a general hospital, must have been struck, as I have been, with the multiform and complex pathologic conditions frequently met with; and with the further fact that even with the patient upon the postmortem table, in the hands of a skilful pathologist, with the viscera laid open to inspection, and with the aid of the microscope, it is oftentimes difficult to discover the primary condition, the connection between the different morbid processes, or to allege with certainty the cause of death.

I have thought, therefore, that it would be a subject of interest and perhaps of profit to collate some of the more important facts concerning the etiologic and functional relations of different diseases and pathologic conditions. I can not, in the short time at my disposal upon this occasion, do more than to very briefly discuss some of the more salient points. A volume could be written upon this theme without exhausting it.

Before proceeding in detail, and to illustrate the nature of the complications referred to, let me cite a few cases taken from the record of autopsies made upon patients from my wards in the John Sealy Hospital during the past few months:

Case 1.—John Miller, 53 years of age, laborer; admitted Jan. 23, 1893. Diagnosis, croupous pneumonia. Died February 9. Cause of death, acute pericarditis. Pathologic diagnosis: Croupous pneumonia in posterior part of lower lobe of right lung; passive hyperemia and brown induration of both lungs; right-sided hypertrophy of heart; chronic myocarditis; aorta atheromatous above the aortic valves; posterior coronary artery almost obliterated by atheromatous placques; the anterior coronary artery converted into a firm calcified tube for at least one inch; the aorta presented calcareous plates at different points throughout its extent; the liver was mottled from fatty infiltration and congestion; the kidneys and other organs showed no positive evidence of disease.

This case presented the history and clinical picture of an ordinary uncomplicated croupous pneumonia; the pulse, however, giving from the beginning evidence of cardiac weakness. The crisis took place about the seventh day, was followed by rapid resolution and amelioration of all of the symptoms, until about February 5 when increased dyspnea, pain, a sense of oppression over the cardiac area, increased weakness and rapidity of the pulse, and well-marked pericardial friction râles, indicated an acute pericarditis.

Reviewing this case, several interesting questions are suggested: 1, did the passive pulmonary hyperemia, resulting from a dilated and weakened right ventricle, predispose to the occurrence of pneumonia? 2, what was the connection between the chronic myocarditis and the acute pericarditis? 3, what was the relation, etiologically, between the croupous pneumonia and the pericarditis? Did the latter result from an invasion of the pericardium by the diplococcus pneumoniæ, or did it result from continuity of structure? 4, to what extent did the chronic myocarditis and the antecedent arterio-sclerosis contribute as the immediate cause of death by weakening the action of the heart? 5, does not arterio-sclerosis, with its frequent

accompanying contracted kidney, largely account for the heavy mortality in the croupous pneumonia of old age and chronic alcoholism?

Case 2.—A. Bolston, age 21, native of France; admitted Nov. 15, 1892; died Jan. 23, 1893. Clinical diagnosis, ulcerative endocarditis and gall-stones. Pathologic findings: Intestinal ulceration; gall-stones; glandular suppuration in mesentery; infarctions of spleen; hepatic cirrhosis and fatty degeneration; fatty kidneys; chronic pleurisy; edema of lungs; chronic myocarditis; splenification of bone marrow.

Here was presented a series of morbid processes as perplexing and incomprehensible as were the clinical phenomena shown during life. When the patient entered the Hospital the symptoms pointed to cholelithiasis of which there were several attacks. The skin, however, remained jaundiced showing the discoloration due to a mixture of icterus and excessive anemia. A slow pulse supervened, and an aortic diastolic murmur became audible, followed by edema of the legs and lungs. There was extreme dyspnea, and during the last few weeks there had occurred several attacks of partial hemiplegia with aphasia.

I shall not dwell upon the reasons which led me to believe that there was an ulcerative endocarditis; suffice it to say that my diagnosis was based chiefly on the development of a heart murmur, dyspnea, dropsy, irregular fever, excessive anemia and cerebral symptoms apparently due to embolism. Was this a case of typhoid fever? Was pernicious anemia the original trouble? The autopsy failed to answer these questions or explain many of the phenomena present during life. Careful section of the brain showed no causes for the hemiplegic attacks.

Case 3.—Old colored woman. At the postmortem the following lesions were found: Chronic interstitial nephritis; cardiac hypertrophy, with right-sided dilatation; induration and edema of the lungs; cirrhosis and venous engorgement of the liver; cirrhosis of the spleen; elongated cervix uteri; fibroids of uterus; pelvic peritonitis.

The pathologic sequences are here more explicable. Undoubtedly the kidney was primarily involved, the cardiac hypertrophy following as is usually the case. The other viscera, exeepting the pelvic ones, became affected in consequence of circulatory disturbances.

The citation of these cases is sufficient to warrant a discussion of my subject. The association of diseases and morbid processes may admit of the following classification under which the subject may be presented:

1. Those diseases associated as a result of a common predisposing cause, e.g., famine, filth and other unhygienic conditions.

2. Diseases arising from the localization of specific infectious agents.

3. Diseased conditions resulting from disturbances of one function interfering with the performance of another.

4. Disorders arising from impairment of function promoting extraneous causes.

5. Morbid local conditions favoring the lodgment of infectious agents.

6. Morbid general conditions acquired, which act by affording a suitable soil for the development of diseased processes.

7. Inherited constitutional predisposition to different diseases having a similar character.

8. Certain extrinsic agents productive of inflammatory and degenerative processes in different organs and tissues.

9. Toxic products originating in the body and producing similar effects and association of morbid processes as the above.

10. Uncertain associations not included above.

This classification, though incomplete, will answer the purpose of the present discussion.

In the frequent concurrence of epidemics of typhus and relapsing fevers we have an illustration of the effects of a common predisposing cause. The reduction of individual and community vitality resulting from famine, filth, destitution and overcrowding added to intemperance, overwork and depressing emotions, diminishes the resisting power of the system and largely contributes to the spread of these diseases. Although each one of these affections has its specific microörganism which is essential to its production, yet the above mentioned factors, predisposing to both, will account for mixed epidemics.

With regard to typhoid fever, such influences do not seem to exert any special predisposing effect, and hence we find this malady affecting all classes of a community, invading with impartiality the hovel of the poor and the palace of the rich.

In the occasional simultaneous prevalence of cholera and yellow fever, in the frequent association of yellow fever, dysentery and malarial fever, we have other illustrations of the influence of a common predisposing cause, and an explanation of the fact that many prominent writers forty years ago strongly contended against the specific nature of each disease and in favor of their common origin and convertibility.

Now we know that such association is dependent upon a widespread disobedience of sanitary laws. The following are instances of the association of morbid processes from the localization of infectious agents: 1, croupous pneumonia in typhoid fever; 2, croupous and catarrhal pneumonia and nephritis in typhus fever; 3, diphtheroid angina, meningitis, pleurisy and arthritis in scarlet fever; 4, croupous pneumonia in cerebro-spinal fever; 5, bronchitis and catarrhal pneumonia in measles; 6, croupous and catarrhal pneumonia in epidemic influenza; 7, orchitis in mumps; 8, catarrhal pneumonia in whooping-cough; 9, catarrhal pneumonia and nephritis in diphtheria; 10, diffuse bronchitis, lobular and croupous pneumonia and pleurisy in smallpox; 11, abscess of the liver in amœbic dysentery; 13, diffuse nephritis in yellow fever.

It is difficult in many cases to determine the cause and the relations of complications, as for example the croupous pneumonia occurring in typhoid fever. Generally, pulmonary affections, diffuse bronchitis, catarrhal and croupous pneumonia are not a direct result of the typhoid infection but are due to other causes, as hypostatic congestion, imperfect expectoration, inhalation of irritants, cardiac weakness, etc. But we do have a pneumonia taking place as a localized infection. As is clearly stated by Pepper[1] in his recent article upon typhoid fever: "Occasionally the disease (typhoid fever) begins with a chill and the symptoms of croupous pneumonia, and there may be nothing to justify the diagnosis of any other disease than this until after a week or more, when the failure of a crisis to occur, the development of rose-colored spots, and of intestinal symptoms, and the general typhoid condition of the patient, may show that the pneumonia was but an early complication of a general infectious disease. In some cases, it may re-

[1] An American Text-Book of the Theory and Practice of Medicine. Vol. I, p. 98. 1893.

main throughout impossible to determine whether we have to do with a typhoid pneumonia, i.e., with a pneumonia with typhoid symptoms, or with a true typhoid fever with initial and predominating pneumonic symptoms and localization."

The above list is illustrative only, but is sufficient to show that an important part in pathology is played by the localization of infectious agents, especially upon the lungs and kidneys, and how important it is to watch these organs in all of the acute infectious diseases.

Let us turn now to diseased conditions from disturbances of one function interfering with the performance of another. Embraced in this category are many morbid conditions whose connections are clearly defined. I can only enumerate here the most common: 1, disturbances of the circulation depending upon organic heart disease resulting in passive hyperemia, impaired function and inflammation of the viscera. Here is an explanation of the fact frequently observed, that cardiac disease is usually announced by symptoms indicative of disease of some other organ: dyspnea, cough, profuse expectoration, possibly hemoptysis, diffuse bronchitis, brown induration of the lungs, depending upon long continued pulmonary venous congestion; 2, disturbances of digestion from passive hyperemia of the stomach, intestines and liver; 3, diminished amount of urine, dark in color, concentrated, highly acid, of a high specific gravity, slightly albuminous, depending upon passive congestion of the kidneys; 4, mental disturbances, impaired intellectual activity, stupor, drowsiness from cerebral hyperemia; these varied phenomena depending upon one central cause, viz., a valvular disease of the heart. Further illustrations of the interaction of deranged function are observed in diseases of the stomach. "Absorption, movement and secretion of this organ have an interchangeable connection, and are, moreover, closely related with disordered conditions of the intestines and liver. And *vice versa*, every disorder of the latter is reflected upon the former, as for example when the stomach contents are abnormally acid, or the organ contains much undigested food. In the latter instance, the chyme will act upon the intestines as an irritant, especially upon the upper part of the duodenum, swelling the orifice of the common bile duct, as a consequence of which the flow of bile is retarded, and the portal blood contaminated with the products of an incomplete digestion slows the hepatic circulation and, on the other hand, the biliary secretion is interfered with. A similar sequence of events occurs when the liver or the intestinal tract is primarily involved. Under such circumstances, we have to deal, not only with the resistance to the expulsion of chyme from the stomach by an overloaded intestine, and the backward peristaltic wave affecting the peristalsis of the stomach, but still farther reaching are the results of venous stasis affecting the entire portal system including the stomach." Thus we have so frequently associated gastric catarrh, jaundice, intestinal catarrh, constipation and diarrhea. Various other illustrations could be given of the mutual interaction of deranged functions, but these, I think, are sufficient.

Now as to the impairment of function promotive of extraneous causes: illustrating the mechanism of such influences tending to produce serious complications, we have the frequent occurrence of diffuse bronchitis, catarrhal and croupous pneumonia from imperfect respiration, expectoration and deglutition. The conditions favorable to the imperfect performance of these functions are present to a greater or less degree in every disease characterized by that *ensemble* of symptoms known as the typhoid state. The circulation in the blood of fever toxines obtunding the sensibility of the brain, causes the patient to lie stupidly upon his back, with feeble inspiratory efforts and imperfect expectoration; to inhale inflammatory agents from the mouth and throat; and to swallow the wrong way irritants of various kinds, particles of food, foul and decomposing secretions, etc. And when to these factors we add an impaired pulmonary circulation from a weakened heart, and hypostatic congestion from a continuous dorsal decubitus, is it any wonder that in typhus, typhoid fever, remittent, cerebro-spinal fever, smallpox, and other diseases of like character, we have serious pulmonary complications taking place as a natural and, in many instances, unavoidable sequence?

In regard to morbid local conditions favoring lodgment of infectious agents, such conditions are chiefly inflammatory and affect mainly mucous membranes. These catarrhal inflammations are of special interest from the fact that by timely curative and preventive measures the onset of a much more serious malady may often be obviated. The association of tuberculous and catarrhal processes of the air passages was for a long time incorrectly interpreted; it was thought that such diseases as measles and whooping-cough were converted into tuberculous. We now know that the inflammatory conditions of the mucous membranes of the air passages, occurring in these two infectious disorders as well as in laryngitis, pharyngitis, bronchitis, tonsillitis, catarrhal and croupous pneumonia, act as predisposing causes of tuberculosis by affording a suitable place for the lodgment and development of the tubercle bacillus. In this way gastro-intestinal catarrh favors the action of the specific causes of typhoid fever, cholera and dysentery. In a similar manner catarrhal processes about the throat, tonsillitis, laryngitis and pharyngitis, favor the likelihood of diphtheritic infection. Such instances could be multiplied, but let these suffice.

Concerning morbid general conditions acting by reducing the resisting power and affording a suitable soil, we have an impairment of vitality resulting from some severe acute diseases such as pneumonia, epidemic influenza, typhoid fever, and also from various unhygienic influences, insufficient food, overcrowding, uncleanliness, alcoholism. Individuals who have been subjected to such influences, easily become the victims of tuberculosis, simply because a suitable soil has been provided for the lodgment and development of the infectious agent.

In regard to inherited constitutional predisposition to different diseases having a similar character, we have an illustration of how an inherited and constitutional weakness may predispose to the association of diverse disorders as, for example, in connection with syphilitic, scrofulous and tubercular processes. Thus a child with inherited syphilis becomes from the resulting cachexia, as well as from the local inflammatory conditions, a favorable subject for the development of tuberculosis. Again, a child, the subject of scrofula or tubercular adenitis, is liable to develop an intestinal, meningeal, or pulmonary tuberculosis. We have a similar illustration shown in the children of gouty parents, who instead of inheriting gout may

have an inherent predisposition to lithemia, weak digestive powers, and possibly diabetes. In certain nervous disorders we observe similar connections. Instead of inheriting the particular nervous malady from which his parent suffered, the child inherits a neuropathic constitution; and hence we notice the association of insanity, epilepsy, hysteria, migraine, alcoholism and the like.

As to extrinsic agents productive of inflammatory and degenerative processes in different organs and tissues, we have certain chemico-toxic and infectious agents which, though differing entirely in chemic constitution, produce similar pathologic results, acting either in the process of elimination on certain organs, or having an affinity for certain tissues, in which case they produce their effects through the circulation. Familiar examples of such agents are lead, alcohol and the syphilitic poison. Thus we find these three lethal substances playing an important rôle in the etiology of a large class of chronic inflammatory and degenerative processes, as for example chronic endocarditis, arterio-sclerosis, chronic parenchymatous nephritis, contracted kidney, cirrhosis of the liver, gout, multiple neuritis and chronic system degenerations, and inflammations of the spinal cord such as chronic myelitis and locomotor ataxia. From the common origin of such diseases we often see them associated, as arterio-sclerosis with chronic endocarditis and interstitial nephritis, contracted kidney with cirrhosis of the liver, gout with interstitial nephritis, cirrhosis of the liver with multiple neuritis, valvular heart disease with locomotor ataxia. In many instances several of these etiologic factors unite to produce a given disease, and it is often difficult to assign to each its proportionate share.

There are certain irritative substances produced within the body which act in a similar way, and produce morbid changes of like character as those mentioned in the last clause. We have, for example, frequently associated a chronic endocarditis and Bright's disease, or contracted kidney with cirrhosis of the liver, etc., where we can exclude any of the extrinsic agents above mentioned, and must assume the presence in the blood of some irritant which i n the process of excretion or otherwise will produce inflammatory and degenerative changes. Our knowledge of the ultimate phases of digestion and assimilation is as yet too imperfect for us to say with certainty what is the chemic constitution of such agents in all cases; but of this fact we are assured, that is, that some derangement in the metabolism of nutrition, depending upon an excess of certain articles of food, especially the albuminoids, plays an important rôle in the etiology and association of diseases such as gout, diabetes mellitus, interstitial and chronic parenchymatous nephritis, chronic endocarditis and cirrhosis of the liver.

There are, again, certain diseases frequently found to coexist, not explicable in the before mentioned categories. I refer especially to cardiac and kidney disease. The association of heart and kidney disorders has been a matter of common observation for a long time. It did not escape the notice of Richard Bright who commented upon its causes more than half a century ago. The connection between morbid conditions of these two organs is manifest in many instances; for example, where the heart is primarily affected, and we have then the kidney of passive congestion, or where we have embolic processes in the kidney originating from an endocarditis, or further yet, when we have disease of both organs resulting from a common cause as arterio-sclerosis; where a hypertrophy of the left ventricle occurs as a sequence of obstruction offered by diseased arterial walls, and, still further, where the kidneys suffer from impaired nutrition, affecting primarily the secreting cells. The pathologic sequences in such cases are readily understood, but what is the explanation of the large number of cases where the kidneys are the organs primarily involved and where there is no arterio-capillary fibrosis?

I can not here enter into details concerning the various theories which have been advanced to account for this connection; the truth is found probably in no exclusive theory, but rather in a combination of them all. Thus we can conceive how an altered constitution of the blood depending not only upon an accumulation in it of excrementitious products, but from the loss of albumen also, would offer an obstruction to the circulation and be followed by a compensatory hypertrophy. And we can understand that there is an element of truth in Traube's mechanical theory; for in many cases in consequence of deficient elimination of water there is an overfullness of the vascular system which might occasion a hypertrophy. The two would not exclude the theory offered by Dr. Tyson, viz., that the process is compensating and another instance of nature's method of supplying the deficiencies of one function by increased action of another. In this case a certain number of the secreting cells of the kidney having been destroyed, the heart, by increased action and consequent hypertrophy, sends the blood coursing through the kidneys under stronger pressure with the effect of increasing the amount of urine, and thus compensating for the loss of renal tissue.

In conclusion, let me mention briefly the principal facts relating to the connection between arterio-sclerosis, cardiac and kidney disease with cerebral hemorrhage and embolism. In almost every instance hemorrhage of the brain is due to the rupture of miliary aneurisms, and later investigations go to show that this disease of the vessel wall is identical with arterio-sclerosis. The etiologic factors also predisposing to cerebral hemorrhage are those which are contributory to atheromatous degeneration of the arterial walls. We have several other factors explaining the frequent association of cardiac and renal disease with rupture of blood vessels in the brain, as, for example, passive congestion from valvular disturbances of the circulation and weakened heart action impairing nutrition of the arterial walls, to which must be added the increased liability to rupture from strain due to a general arterial tension, the latter being an almost invariable accompaniment of interstitial nephritis and the hypertrophied heart connected with it. Hence we find hemorrhages of the brain productive of either mild or severe hemiplegic attacks or directly causing death in many cases of contracted kidney.

The *rationale* of cerebral embolism and thrombosis in connection with heart disease admits of easy explanation. We have frequently occurring thrombotic deposits upon the mitral or aortic valves, from chronic or ulcerative endocarditis, which are often washed off and lodge as emboli in one of the cerebral arteries; thrombosis is favored also by arterio-sclerosis through the roughening of the inner coat, inelasticity and occasional narrowing of the arteries. We may thus

have clots forming in the aorta or arteries at the base of the brain from whence they are carried into the smaller arteries as emboli.

WHY GENERAL PRACTITIONERS SEND CASES TO THE HOSPITAL.

BY S. S. TOWLER, M.D.
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I have adopted the above title simply because I could find no other for this brief paper, and yet it does not express all I want to get at. In an excellent article in the JOURNAL of January 27, Dr. Keister says that, "in nine cases out of ten, it is sheer stinginess on the part of the physician, that he is not properly equipped with instruments. This point, and one other, are the only exceptions—that I see—to take to that practical paper. The "one other" is this: "Conservative surgery is yielding better results every day, and I believe the time is not far distant, when women's ovaries will be let as severely alone by the abdominal surgeon as the Holy Bible." All I want to suggest on that point is that perhaps if "the abdominal surgeon did *not* let the Holy Bible," so "*severely alone*," he might operate less on "the women's ovaries." However, there are abdominal surgeons, and surgeons abominable. Stinginess will, to a great extent, cover a class of doctors without instruments, but there is a large number who will not purchase a full office outfit for the same reasons that they and others send cases to the city, or call a specialist.

There are first, the class of practitioners who know that they have not the nerve or skill to be good operators, and yet many of them are *good* physicians. These men send their patients, not because they know so little, but because they have arrived at that point where they know *what* they know. A man may be a most excellent physician and yet a very poor surgeon, and the physician who knows *that*, is to be commended for sending elsewhere. He is away ahead of the fellow who, thinking he knows it all, blunders away at all hazards.

But there is another reason why special cases go to the hospitals and experts: That is, because the general practitioner, especially in the country, has a very different environment from that of the man in the city. Every one knows the successes and failures—so to put it—of the country doctor, and unless he has attained an age and experience that protects him, his fatal cases are fatal to him.

To illustrate: In 1868 I had my first thigh amputation. About the same time Dr. Joseph Pancoast performed exactly the same operation on a wealthy lumberman a few miles away. Dr. Pancoast came and went the same day, and received for his work, $1,000. I got the county fee bill of $125, and had to take care of my patient until well. Some four weeks after this, Prof. Pancoast was up in my section on non-professional business. Meeting me, he said: "How is your patient?" "All right," I replied; "come and see him." Arriving at the house he looked the stump over, and said very kindly: "Good job; good as mine; it's all right." "Not exactly, Professor," I replied; "not exactly. It looks to me all wrong. Now here am I, a young fellow having all the no good, no pay patients shoved on him, and glad to get cash enough to pay my salt. When I do get a good case I have to take the county fee bill; you, said to be wealthy, get $1,000 for less work. In the equity of the thing I ought to have the thousand, and you the one hundred and twenty-five." He laughed for a moment, and then with a kindly sympathy and grave face, as he put his arm over my shoulder, said: "That is not the worst of it, my boy. I could have killed my patient, and it would have been all right; your patient might have died under the best treatment in your hands, and it would have killed you." That was years ago, and while I have safely passed that sort of fear, yet there are a great many practitioners subject to that same risk.

The country (and I include in this, town and country practice outside of larger places) surgeon may know that he can do an operation, and do it well. But no matter how well done, so far as skill is concerned, if the patient dies in the operation it takes years to live the effect down. If a patient goes to a hospital, with a fatal result, or dies in the hands of a specialist, it is, "Divine Providence that removed," and *not* "the great hospital doctors we had when Ann died."

The bickering jealousy in the profession is largely responsible for this. All the colleges in the world will not take meanness out of a man if it is born in him, and in the recent years when M.D.'s were made in "job lots," the profession got its share of the mean men in the world. A country doctor's patient dies in the operation. The next country doctor says: "I am sorry, very sorry, but why didn't the fool send her to a hospital? He never ought to have attempted such a thing." The next country doctor says: "I was afraid of that; I almost felt certain he could not carry that case through. He is too risky, too risky." Perhaps one out of the lot comes out like a man, saying: "He was all right. That same result would have happened any way, or in any one's hands. No one could foresee it." But mark you, every old woman in "the country-side," takes up the woeful tale, and spreads it around until harrowing stories of how "Dr. Smith grubbed in her belly with his hands and tore all her insides out," are told at every fireside. Poor Smith, who was perhaps the brightest doctor in that whole section, comes to be looked upon as a "butcher." Next time Smith gets a chance he sends the patient to the city, and goes along himself to take a hand in the business. Result: "Ah! Why didn't he do that with poor Mrs. Jones that he butchered to death?" Then if Mrs. Brown comes back cured, or partially relieved for the time being, she becomes at once a sort of heroine. Every woman in the town or country for miles, who has either a real or fancied pelvic trouble, and whose husband can raise the "ducats," wants to follow suit, and the family doctor must help the scheme, or take the consequences. Away goes the procession, and the general practitioner gets his pay in the taffy that the specialist sends to him through the patient.

Again, the country surgeon has constantly before him the possibility of a malpractice suit. Even in the line of general surgery this is a continual menace. A badly fractured leg or mangled arm, no matter how skilfully treated may get him into untold trouble. Much more is an unfortunate result of an operation of his own proposing, in special surgery, liable to do so. Furthermore, the more charity in his soul, and the poorer the patient, the more likely he is to be persecuted as well as prosecuted.

Again, the profession itself is largely to blame for this. Dr. B. sees a fellow with a limping leg. He squeezes it a time or two, and says, in a tone of righteous indignation and assumed great knowledge: "Who set that leg? The man who did that job ought to be prosecuted." With no thought or care of how good a job Dr. A. had made of a very bad leg, he spits out his professional venom. Away goes the fellow limping worse than ever—indeed, now he can hardly get along at all, and has a little groan for every step—and sees a lawyer. Result: "Certainly, sue Dr. A. He has inflicted great damage on you. Ten thousand dollars is what we want from him." Sue he does. Dr. A. comes out triumphant, but it has cost him hundreds of dollars, and weeks of time for himself, and lost days for his medical friends, to gain his victory. Result again: In that section the most risky cases are sent to the hospital. That is no overdrawn picture. In this and adjoining counties the best medical men in them—and I use the expression advisedly, have been subject to just that sort of treatment. In one case the claim was for damages for a ruptured perineum. At the trial the evidence showed that the very doctor who urged the suit had used the forceps in delivery, and that the defendant had had no opportunity to rupture the patient at all. In another case the prosecuted doctors had gone so far in their interest in the case, as to procure without cost, the services of the late and great surgeon, Dr. Hays Agnew, for their patient, but that did not save them from suit, though they won the case before the jury.

Another case after weary months was won by the defendant at a cost of over three hundred dollars. Another doctor, not very far from me, had a verdict rendered against him which was so unjust that the court granted a new trial. The next jury decided against the doctor, and again a new trial was granted. A third jury and a third new trial followed, and then the case was compromised.

In another case the plaintiff demanded $20,000. Inside of time of trial he offered to settle for $35, and on being told he could not have 35 cents, proceeded to postpone the case from court to court, until the defendant got hot and put the case on the trial list himself. The plaintiff never appeared. The defendant got a non-suit and full allowance of costs. The plaintiff, as usual, was not worth a copper, and the defendant was at a great loss. In every one of these cases the instigator was one of the profession. In addition to this form of affliction, the country surgeon is aware of the unfortunate fact that in his community one fatal result in surgery outweighs a dozen successful cases. The good cases are soon forgotten; the bad ones never.

Again, the country physician is at a disadvantage in special cases, especially those that require *rest*. If his patient is fairly well off, and has good common sense, he will succeed in having his orders carried out. But if he says to a patient, with a large family, and whose "hired girl" has skipped out without notice: "Madame, one thing you must have, and that is absolute rest"—the patient looks at him despairingly, and says: "Doctor, how can I have that with my family cares?" Result: She takes lots of medicine, washes, douches, battery treatment and so on, and gets no better. In despair, the husband raises some cash and sends her to a hospital where she gets the rest she so much needed—and perhaps what she got besides she didn't need. As in the surgery case, she sets the pace for other women and away they go, one after the other. All these elements combine to put the country doctor at a disadvantage, and to lessen his desire to treat special cases.

It is admitted, certainly, that this state of affairs is very largely wrong. More special cases ought to be treated in the town and country than are treated there now. The only remedy I can see is this: 1, the country doctor ought to have his trained nurses, the same as the city man; 2, County, State and National societies ought to be made so strong and so well organized as to form a practical defensive and—so far as the caviling, sneaking, backbiting doctors are concerned—offensive alliance, that will not only afford ample protection to the honest practitioner, but silence the croakers and educate the public. These societies are of more use to the general practitioner than any one else, and are the best means of elevating the tone and dignity of the profession. Besides this, one meets through them some of the best fellows in the world. I have never known the "weakest vessel" present at such meetings, to be rudely repelled by the "biggest guns," but kind and courteous consideration is the rule.

The last points are mentioned to show the value of organization, and not to encourage needless bother of busy men, because they are good-hearted. Dickens said once, that Americans when not clear as to what should be done would hold a meeting and "*resolute*." It is more to the purpose to build up the County, State and National organizations. The highest possible motives sanction it, and even the rather mean motive of "policy," if a man has no higher, encourages it. So, having come to lastly, in my effort to give a reason why hospitals are never short of "clinical material," and to suggest a remedy for the troubles of the country brethren, I pronounce my benediction on the JOURNAL, and go to bed.

MY EXPERIENCES AS A SPECIALIST.—A DREAM.

BY J. L. TRACY, M.D.
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Psychologists have never satisfactorily explained the process by which we unconsciously and yet seemingly voluntarily permit ourselves to give audience to the acts and sayings of the peoples of dreamland. The ego of our dream has never been accounted for either. His relationship to ourselves, however, seems as we recall him, to be in many instances a very close one. He is like us and still is decidedly unlike us.

He appears upon the mystical stage which borders hard upon life's pathway, acts his part and retires behind the scenes. We awake to think, study, wonder and theorize concerning him, and we tire, cerebral anemia presumably, obtains, we nod in our chair and find him bowing to us. Evidently he follows us when we are awake, and we follow him when we are asleep. We call ourself the substance, him the shadow. This ego, our other self, takes possession of our quiescent physical body, divests it of tangibility and sensation, and with this etherialized body starts off, without effort, to travel long distances, and without a feeling of shame parades it naked through the

streets. He makes the body live consecutive days, weeks and months, without the expenditure of what we call time, and with no thought of incongruity places it in a saddle, to ride its best friend for a horse. The different stages in the dissolution of self are noted with interested indifference, our other self even in some instances watching his own burial, expecting and experiencing his own resurrection, and then going on to live lengthy periods in the spirit world. Psychologists have never been able to explain these things to us, because any one else knows as much about dreams as the psychologist does.

Psychologists doubtless dream according to psychologic law, but all dreamists do not dream that way. I do not. A biographer of Napoleon Bonaparte says of him, that he was a medley of contradictions, an incomprehensible self. My dream self in those respects, is much like Napoleon Bonaparte. If a man were responsible for what he dreamed, a dream like one of mine would load him up with responsibility pretty fast, and if any reader of this JOURNAL ever attempts to write a dream, he will feel the necessity of prefacing the narration of his experience while in dreamland, with such a statement of facts regarding dreams in general, as will shift all responsibility for the dream-thoughts upon his incomprehensible self.

The thought of irresponsibility for having dreamed a dream, is to me a great relief. My dream-self never pays any attention to me, and never talks about me to my back, as I do about him, so that I do not know what he thinks of my way of doing things. Judging though by the friends that I seem to make while in dreamland, my dream actions and sayings are quite as much in harmony with the opinions of the inhabitants of dreamland, as are my waking thoughts and practices with the things which are more unquestionably mundane.

I would not tire you with what the French people call a résumé upon the subject of dreams, yet, somehow, it seems to me that I will feel freer to relate the incidents of my dream, when I have called your attention afresh to some of the freaks which dreams may play; but, I feel safe even now, to go so far as to assert that I dreamed that I was a specialist.

I would have you bear in mind that in my dreams, incoherency, grotesqueness, improbability, inconsistency and absurdity, are always to a lesser or greater degree innate. To my dream-self, however, there is no thought of absurdity, but, on the contrary there is a logical working out of the laws of cause and effect, and desired results appear to be attained by the use of the phantasmal means at hand. Dreams as ordinarily dreamed, have been classified as air-castles, novel-reading, hair-invigorators, theosophy and plain dreams. This classification shows the evasiveness of dreams. At first sight I thought it an exceedingly unscientific one, but after a studious effort of some length to improve upon it, there came to me the old adage, that it is easier to discover a fault than it is to correct it, and I decided to let the classification alone.

Notwithstanding alienists teach that the longest dream is scarcely longer than a few minutes in duration, there is a good deal of time wasted in dreaming. A dream, as I have said, annihilates time, distance, and the material. It ignores our best waking thoughts, and puts two bodies into the same space at the same time. A dream mocks at reverence, and makes us reverence mockery. We see as regular order, retrospection preceding perspection. A dream laughs at a difficulty, recognizes no such thing as a problem, but on the other hand presents you with the solution which balances without the shadow of a doubt. My dreams to my dream-self are realities. A dream must have its conception in some wakeful thought. For instance I could never have dreamed that I studied and worried over the selection of a specialty, if I had never heard of such a field of practice, any more than one who had never heard of the conflict, could have dreamed of the battle of Waterloo. Sometimes in dreams, the hobby of the dreamer comes to the surface, and in this instance, I recollect that I examined each specialty which presented itself to me, from the point of view of its probable money value to me. How I came to think of reflexes I do not now recall. I do remember distinctly though, that I threw out of consideration everything which did not have within it a good reflex center.

I dreamed that I finally selected habitual constipation as my specialty. The very general prevalence of the affliction, and the possible reflexes which could be made to radiate from it, struck me as being very valuable features. I examined it carefully, in my dreamy sort of a way, and could scarcely think of a disease which could not be accounted for as a reflex of habitual constipation. I was known in my town as the habitual constipationist.

To get my specialty before the public, I thought out what seemed to me then to be an original idea, of searching the records of the past for evidences of its earliest existence. The result of my investigations was a collection of curious instances wherein it seemed to me that habitual constipation had been, in some incomprehensible manner, overlooked as being the exciting factor in the arena of life. I issued reprints of my article, and in my dream it was not long until I had an extensive practice among paying patients. Since my dream, I have recalled the fact that years ago, when I was a medical student, I had visions of such a patronage. If I had a free clinic I can not recall it. Memory is one of the most treacherous and untrustworthy things upon which we place reliance, and so it may be that during my dream my mind recalled impressions which earnest efforts afterwards failed to bring to memory. At any rate, to the best of my recollection I had never, until in my dream, associated the instances which came to me then, with habitual constipation. The symptoms of my visionary patients were always the verbal expressions of themselves, or of others. Why that was so, is just as unanswerable as some other mysterious things connected with dreams.

The cases which I particularly recall, or which I can recall with sufficient distinctness to enable me to present to you, show another peculiarity of dream thought, which is that a trivial incident of early childhood may seem to be of the same importance as are questions which affect the welfare of a nation. Lack of detail is an ever present characteristic of my dreams, and in this dream how I got to my patients, or how I was sent for are shadowy facts which were left out of the dreamy make-up. I have numbered my cases, but whether in the order in which I dreamed them, I do not know. I never dream consecutively.

Case 1.—Mary, aged 7. History negative. Blonde. Curly hair; eyes blue, fairly nourished, temperature, pulse and respiration normal. I had been sent for by her teacher. I

found her at school, in a little schoolhouse at a country cross roads. I noticed a lamb with a ribbon around its neck, nibbling grass in the schoolhouse yard, as I went in. I found the teacher surrounded by the pupils, who were crying, and asking her: "What makes the lamb love Mary so?" Mary sat in the corner by herself, apparently studying her lesson. I dreamed that I thought as I looked at her, that no one but a specialist would think for a moment that there was any serious thing the matter with Mary, but when I left my office to go to see the patient, I had very little doubt as to what condition I would find her in. In a dream diagnosis, I think that a preconceived opinion like that, very largely shapes one's conclusions. I diagnosed habitual constipation, very much to the teacher's surprise. The steps to my diagnosis were, tender age of patient, great susceptibility to impressions, and long companionship of playmate. A mimetic, habitual constipation. I advised as the only possible relief, an operation, which was declined, and the patient passed from my observation.

Case 2.—Male, aged 40; married; a citizen of Indiana. Tall and slim; long bony arms; heavy whiskers and eyebrows; hair long, and combed straight back over his ears. Teeth discolored by tobacco, which he continuously chewed. Extreme nervous temperament. Heart and lungs were not examined; cerebral symptoms were not looked for. His landlady said that when he first came to Washington he had a ravenous appetite; lately though, he had eaten less and drank more. He was having one of his attacks when I came into the room. The first thing which I heard him say, was: "He who doubts he is a dastard; he who dallies is damned."

The puzzled expression upon the faces of those around him plainly showed the want of a satisfactory diagnosis. To me in the dream, his condition seemed to perfectly illustrate the baneful results which follow lack of confidence, and the putting off from time to time, attention to those calls, whose strict observance is the price of physical health.

Another symptom which I noted, was an inflated ambition to be known as a reformer. At the time I saw him he was presenting a bill, entitled, "An Act Regulating the Formation of Funeral Processions, Labor Day Parades, and all Street Displays Whatsoever." I do not remember the detailed workings of the proposed Act, and if I could recall them they would hardly add anything to the importance of the symptom. I do remember, however, that the change or reform which the Act proposed, was to have the two-wheeled carts, one-horse rigs, and the poorer turnouts placed at the head of the procession; the silver-plated harness, bangles, and liveried footmen to bring up the rear. A few minutes spent with the physicians in attendance, was sufficient to convince them that it was a case of habitual constipation. An operation was decided upon, and the next morning set for making it, but whether it was done, and if done whether I regarded the operation as a successful one or not, I can not recollect.

Cases 3 and 4.—J. and G., boys aged 9, twins. Parents dead; cause of death not known. Scarcely of average height, illy nourished, and because of their remarkable resemblance J's hair was allowed to remain long while G's was clipped. Just before I arrived, they had both

"Gone up the hill to draw a pail of water."

I was told that they usually did so about four times a day. Owing to the commotion among the grief-stricken friends, I could not learn the exact size of the pail. There appeared though to be no doubt but that there had been quite marked polyuria. I remember calling the attention of the physician to the fact that one pail to two boys, meant one-half pail to one boy, and that the amount was not as he had calculated, four pails each, a day. He had been content with finding the diabetes, and had so diagnosed the cases. No postmortem examination was allowed, but I was convinced, and so expressed myself, that the diabetes was reflexly the result of irritation caused by habitual constipation.

Case 5.—Male, aged 46. United States. Does not know anything about his parents. Brothers and sisters, if living are, he says, younger than he is. Weight 230 pounds; red face; eyes half closed. Temperature $101\frac{1}{2}$; respiration a little hurried. There is a good deal of excitement—though singularly enough, the excitement seems to be mixed with a considerable degree of obtuseness. Appetite for food, nil; mouth dry; breath emits a very strong odor. I found him in spite of the well-meant solicitations of his friends leaning against his desk, and demanding that the presiding officer tell him "where he was at." The real underlying cause of the mental condition of this patient was so obscure as to have greatly perplexed the physicians who had been in attendance.

As this condition of clouded excitement passed off, he would, so to speak, become poetically melancholy. There were two stanzas which seemed to occupy his mind most of the time. One of these was,

"The mill will never grind again
With water that has passed."

The other, very much like it in sentiment, was,

"Full many a flower will bloom and blush unseen,
And waste its fragrance on the desert air."

One of his physicians who was a very matter-of-fact kind of a man, had tried to arouse him from his melancholy thoughts by telling him that it would be a new kind of a desert which had flowers in it, and the patient discharged the entire corps of physicians on the spot.

I very soon became convinced that it was a case of habitual constipation. In all of my cases I remember that I always advised an operation, but I can not recollect the nature of the operation. How I came to associate an operation with habitual constipation I can not conceive and still whenever I could get consent to operate I remember that I always made an operation of some kind, and did remove something. This case was under observation for a year or so, and his most intimate friends regarded him as cured. I felt safer though in recording the case as improved, which I did.

In one of my dreams a century or two makes a very little difference. The past, present and future, all seem to be of the same tense. One of my Ireland dreams is just as sensible, and just as systematically gotten up, as is one that was located in Ohio. When I dream a foreign dream, I do not always imagine myself to be in a foreign country. I have the peculiar faculty of Europeanizing American scenery so as to bring it into harmony with the citizen of any other country whom I have happened to run across. Sometimes, and the next case is an instance of that kind, I do not remember anything regarding the residence of the principal actors in my dream.

Case 6.—H., male, aged 21. Height five feet nine inches. Weight 170 pounds. Black hair, black mustache, black eyes, dark complexion. Body muscular. Father died a few months before of some external trouble. Only sick an hour. Mother living, of fickle disposition, if not positively depraved. I did not arrive until an hour after his death. Not much could be learned of his childhood, but at his maturity he was of more than average intelligence. He was, too, impulsive and inclined to be sentimental, and so when a year or so previous to his death those about him noticed that he was in love with a girl of the neighborhood, they were not surprised to find that he was in love with all his might. I had been asked to see him on account of the development of symptoms which threatened insanity. I was told that he had never located his trouble in any particular part of the body, but that his symptoms had been of that vague, undefinable character, such as is common to nervous trouble of reflex origin. To friends who had tried to comfort and encourage him, he had complainingly asked:

"Who would these fardels bear,
To groan and sweat under a weary load?"

He expressed himself as "tired of the load" and said that to be rid of it

"Was a consummation devoutly to be desired."

The dominating theme of his erratic, though purposeful delineation of his trouble, was contained in the introductory phrase, "To be or not to be, that is the question."

I dreamed that this case was an exceedingly difficult one for diagnosis to the physicians in charge of it. I went at

the case with the thought in my mind that it was probably a case of habitual constipation. I recalled the sudden death of his father, the estrangement from him of his mother's affections which followed close upon her somewhat hasty acceptance of new bed and board, his love affairs, in which had been currents which had not run smoothly, and the condition of unrest which pervaded society generally. These were all of a disquieting, dispiriting tendency, exactly such circumstances as are likely to produce irregularity in the habits of life. After viewing the probable effect upon the patient of all these forces, I had little difficulty in convincing the physician that the trouble had been habitual constipation.

I considered myself very fortunate that I was permitted to make an autopsy, and was much pleased when the examination confirmed the diagnosis. I secured what I looked upon at the time as a very beautiful specimen, but just what the part which I brought away was, I do not recollect. I dreamed that I put the case down as one which illustrated the foolishness, if not indeed, the criminality of trusting in such cases to medication.

Case 7.—Male, aged 50, United States. Medium height; weight 250 pounds. Dark hair, mustache and eyes. Florid complexion, body well developed, and inclined to corpulency. Large head and larger neck. Temperature 97; pulse 76, respiration 22. Appetite good, digestion perfect, sleeps well at night. Marriage relations not inquired into. Family history excellent. His physician noticed nothing in particular wrong with him, until one day the patient began to insist that he was "confronted with a condition, and not a theory." Of itself, this symptom did not seem to the physician alarming, but there was such a positiveness in his manner of describing his trouble, as to cause some uneasiness to the physician, and so I was sent for.

I dreamed that I found the patient seated in a fishing boat, waiting for his helper to adjust a new bait. I thought that there was something so peculiar about his malady as to have attracted wide attention. I dreamed that there were many conflicting opinions among physicians as to the nature of the trouble, and, in consequence, many different plans of treatment had been proposed and tried, but without benefit. I dreamed that I studied and tried to analyze a great mass of symptoms without reaching a definite conclusion. I do not now see why it should have been so, but in my dream thoughts the word, "confront" seemed to be an insuperable obstacle to making the diagnosis of habitual constipation. His persistent statement that a condition confronted him, was in my way for a long time, and I had nearly despaired of making the diagnosis, when I chanced to stumble upon the symptoms of "innocuous desuetude." This symptom, to my mind, cleared up the diagnosis at once, in which diagnosis the physicians in attendance readily concurred. They joined me in advising an operation, to which the patient consented. While the preparations for the operation were being made, the patient related to me an incident which happened a few days before:

He said that some kind of a parade or celebration had taken place in some inland towns and, as part of the display many balloons, profusely decorated with small flags had been sent up. He said that in floating off, the balloons would collapse, the little flags would become disengaged from the balloons, and dart to the ground. He said that he had been lazily watching these flags fall for some time, when he happened to fix his eye upon one which was about to strike the ground near him. The flags fell staff downward, and as this one struck the earth he saw it sever from the body the tail of the common swift or newt, a little animal of the lizard group, the *spelerpes longicauda*. I dreamed that he said the staff of the flag was sharpened flatwise, which made it cut more smoothly than it otherwise would have done. The animal ran off and hid itself among the rocks, but the tail lay where it fell. I dreamed that my patient said that as he sat watching the tail wiggle about, as such tails will, that he could but think of the accident to the lizard as one of the purest chance occurrences which had ever come under his notice. Hours before, in a distant city the little flag had borne its humble part in the display, had floated away through space, had fallen to the ground and injured the little *spelerpes longicauda*. To physicians the most interesting part of the story is in what followed after the tail had been severed from the body. He said that while he was musing upon the accident, he noticed the animal emerge from its hiding place, slyly steal up to where the tail was, grasp it under one of its fore legs, and carry it to the water's edge. The lizard then carefully washed the wounded end of the tail, and the stump end of the tail upon its own body; this done it laid the tail upon a stone, and, backing up to it, laid the wounded ends carefully in coaptation. After remaining perfectly quiet for a few minutes, the lizard slowly moved away to its hiding place again, taking the tail which had adhered to the stump, with it. My patient told me that he saw the lizard the next day, and there was only a dimly perceptible scar at the point where the amputation had taken place.

I was a little more incredulous about some parts of the story than I cared to express to my patient, and so made an excuse for consulting his library, which I dreamed he had with him in the boat, and I found in an encyclopedia mention made of the alleged recuperative powers of this animal under like circumstances. The manner in which the accident to the lizard had happened, I had not doubted.

I now learned that my patient had been, a year or so previously, operated upon by an habitual constipation specialist, but as there was a difference of opinion among those who witnessed the operation as to whether all of the parts had been removed, I decided to make an exploratory operation and clear up the uncertainty. If nothing to remove were found, the operation would stop with the exploration.

From this on, I only remember that I felt satisfied with the operation, and considered it a success. I recall also that I thought I kept watch of my patient for a number of years, and as no positive symptoms of the trouble showed themselves up to that time, I recorded the case as recovered.

APPENDICITIS WITH ORIGINAL REPORT, HISTORIES AND ANALYSIS OF ONE HUNDRED AND FORTY-ONE LAPAROTOMIES FOR THAT DISEASE UNDER PERSONAL OBSERVATION.

Read before the Pan-American Medical Congress.

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It might seem necessary to offer an apology for presenting a subject that has been so thoroughly discussed at medical associations and so voluminously considered in medical literature in the past four years. But I will offer none for presenting this subject, as many of its important relations to the physician and patient are still moot questions. There is probably no subject in abdominal surgery on which the profession is so divided and on which such opposite views are entertained. Gynecologists are fairly well agreed on what the procedure should be in cases of pyosalpinx, ovarian cysts, and even now on fibroid tumors, but at every medical meeting in which the subject of appendicitis is discussed we find the physicians almost equally divided for and against operative procedure. The question presents itself, Why are they thus divided? The answer is, They are divided because they have different views, or better, because they are not informed on: 1, the pathologic conditions that exist; 2, on the probable course or clinical history of the patients suffering from these pathologic conditions unaided by the surgeon; 3, on the comparative results to the patient by the aided and unaided methods. I will not consider

the anatomy of the appendix, nor treat of the various positions in which it may be found. The excellent paper by Dr. Joseph D. Bryant fully elucidates that subject.

Pathologic Conditions.—Let us first consider the pathologic conditions that exist. The inflammatory or infective lesions of the appendix for a scientific discussion of their relations to the comfort and life of the patient should be divided into the following classes, because each class has advantages and disadvantages peculiar to itself, and in considering the effects of these lesions upon the patient a fair idea of the percentages can not be obtained unless the classification is carefully carried out, so that the degree of jeopardy may be uniform. The lesions of the appendix and their effects on the surrounding organs and peritoneum should be divided into:

1. Simple catarrhal appendicitis.

2. Ulceration of the mucous membrane without perforation; *a*, pressure atrophy with infection; *b*, simple ulceration with purulent accumulation; *c*, typhoid ulcer; and *d*, tubercular ulcer.

3. Ulceration of the mucous membrane or ulceration of the appendix with perforation.

4. Gangrene of mucous membrane of appendix; *a*, local; *b*, general.

5. Gangrene of appendix complete; *a*, with perforation; *b*, without perforation.

6. Infection of peritoneal cavity; *a*, *without* perforation local and general; *b*, with perforation local and general.

7. Peritonitis; *a*, local peritonitis without limiting adhesion; *b*, circumscribed abscess; *c*, diffuse general.

The scope of this paper does not include the neoplasms, traumatisms, nor herniæ of the appendix. I include in this paper the cases occurring in the practice of my partners, Drs. E. W. Lee, F. S. Hartman, and H. R. Wittwer, as the cases were all treated on the same basis, and had equal chances of recovery. Though the actual operations were performed by

Dr. E. W. Lee	20 cases with	5 deaths.
Dr. H. R. Wittwer	4 cases with	0 death.
Dr. F. S. Hartman	9 cases with	1 death.
Dr. J. B. Murphy	108 cases with	10 deaths.
Total	141	16

Mortality with my own cases, 9.2 per cent.

Etiology.—The pathologic lesions above mentioned are produced by certain causes which we will classify as:

1. Simple pus-infection, producing the catarrhal variety.

2. Extensive infection of wall by the amœba coli or pyogenic microphytes, producing gangrene of a greater or lesser portion of the appendix.

3. Pressure atrophy with infection of appendix; *a*, fecal concrement; *b*, foreign body.

4. Specific infections, as typhoid, tubercular, etc.

5. Retention accumulations; *a*, from cicatricial contraction; *b*, from occlusion with enterolith or foreign body.

Perforations of the appendix from various causes, I have found in the report of 465 autopsies of this disease occurred 324 times; of the appendices removed by us, there were perforations 39 times, and 58 removed during attack, or 70 per cent.

The simple catarrhal variety of appendicitis without retention is seldom brought to the surgeon's attention; more frequently, and still not often, to that of the physician, as it usually accompanies a catarrhal enteritis, and has no symptom peculiar to itself except a slight excessive tenderness in the right iliac region. Of this class, we have not operated on or seen a single case. Catarrhal inflammation with retention is a very different condition; it presents a serious train of symptoms, producing a pulse as high as 130, temperature of 105 degrees, as can be seen by Cases 65 and 118.

This form is frequently brought to the surgeon's attention. It is accompanied by a train of severe symptoms both local and general, and endangers the life of the patient much more than the preceding one. There were three cases of this variety operated on, all recovered. Of the 141 cases operated on, the appendix was found completely gangrenous and not perforated in 4 cases, with 4 recoveries, no deaths. In this form of appendicitis the appendix is usually surrounded by bowel or omentum without a pus infection of the peritoneum.

Pressure atrophy of the appendix with perforation was considered in former times to be due in the majority of cases to foreign bodies that had passed into it from the alimentary canal. This was erroneous. Later observations show that only a very small percentage is due to foreign bodies, such as seeds, cherry stones, etc., passing into the appendix in that manner, but the great majority of pressure atrophy perforation is produced by fecal concretions (enteroliths). Number of foreign bodies in our cases, five, 3.5 per cent.; number of fecal stones, forty-three; percentage of fecal stones, about 30 per cent. This does not represent all, as many of the appendices allowed to remain undoubtedly contained them.

The specific infections seldom produce obstruction of the appendix or special symptoms. Of our cases, we had one of the typhoid variety. Mrs. B., Case No. 46, operated; recovered. Of the tubercular variety we had one case, and the patient recovered from the immediate effects of the operation, and died of a general tuberculosis eighteen months later.

Retention accumulations in the appendix from cicatricial contraction occur where an ulcer has previously existed in the appendix, and the contraction so occludes the caliber of the base of the appendix that the secretions in the cavity of the appendix accumulate, produce distension, bring on attacks of pain, fever, and local tenderness, and finally rupture. The only cases of this kind were Case 101, twelve attacks in two and one-half years, and Case 126, five attacks in eight months. The effects of the obstruction of a foreign body or concrement at the base of the appendix is the production of a gangrene of the appendix: 1, by infection and gangrene, not by restriction of circulation, as the appendix receives its blood supply from the side, not from the end; 2, by retention of contents; and 3, by strangulation from swelling of mucosa. The cases of this kind will be considered under the head of gangrene of the appendix.

Pathologic Lesions.—Simple recurrent catarrhal appendicitis is considered by physicians to be a frequent disease. The course of this disease is supposed to be an inflammation of the appendix and an accumulation within the appendix of the products of inflammation with the subsequent escape through the opening of the appendix into the cecum. That recurrent appendicitis is not of this variety, I am convinced.

Recurrent appendicitis in the cases that we have operated upon is due most frequently to a foreign body in the appendix, and next in frequency is due to cicatricial contraction, and these recover not by the passage of the products of inflammation through the neck of the appendix into the cecum, but by ulceration from without inwards in wall of cecum from a circumscribed suppuration about the appendix at the seat of the foreign body. These cases are misnamed by some authors, cecitis or pericecitis. Matterstock, in 146 autopsies for perityphlitic abscess, found the cecum perforated from within out only twice. Number of cases of this class diagnosticated recurrent catarrhal appendicitis, and operated on by us, 3; of these, all showed rupture of wall and opening into cecum, and all recovered.

A simple ulcer of the appendix produces symptoms in two ways: 1, by occlusion of the appendix from a swelling of the mucous membrane, and the tension produced on the serous coat; 2, by an infection of the peritoneum through the wall of the appendix, or along its mesentery. In the literature on this subject we are led to believe that a pus infection of the peritoneum only occurs with perforation. This is erroneous, as in a number of our cases with simple ulcers of the appendix we had: 1, an infection of the mesentery and peritoneum, and yellow flakes of purulent material (see Case 67); 2, accumulations of a quantity of pus in the peritoneal cavity without perforation (see Case 143). This is very important, for in ulcerations of other portions of the alimentary canal such pathologic conditions are reported as occurring; and why should the mesentery of the appendix not be infected, or why should the peritoneum not be infected without perforation of the appendix, that is, by simple ulceration, as in other portions of the alimentary canal? There is no reason, and while it has not been previously noted, I have found it nevertheless a common pathologic condition.

That simple ulceration of the appendix with perforation should produce a serious, if not fatal, peritonitis, is to be expected the same as perforating ulcers of other portions of the alimentary canal. When a perforation first takes place, to which there are many exceptions, the rule is that adhesions are formed about the appendix, but as the accumulation outside of the appendix increases, these adhesions are ruptured and the contents of the abscess cavity escape into the peritoneum with the results to be considered under general septic peritonitis.

Partial gangrene of the appendix is produced in three ways: 1, mechanical compression by foreign bodies; 2, by accumulated fluid; 3, by, and most frequently, by infection of wall; *a*, biotic; *b*, toxic. The latter was the most frequent condition.

Complete gangrene of the appendix; *a*, with perforation; *b*, without perforation. In complete gangrene of the appendix, either from compression at its base by a foreign body or by infection of its wall, destroying the vitality of the tissue, or by contortion, shutting off its circulation, if an early operation is performed the appendix will be found black, nonadherent, surrounded by omentum, which is adherent to the wall of the bowel, and without pus infection of the peritoneum. It looks as though it were a miniature gall-bladder with extremely thin walls; The dangers of this variety with early operation before it has perforated, one can readily see would be small, as the cecum can be lifted into the wound, the appendix ligated, excised in the absence of pus in the peritoneal cavity, and with very little danger of subsequent infection. When the appendix has perforated, as in subdivision *a*, the contrary is the case. We have a greater or lesser accumulation of the products of infection and gangrene of the appendix, the microphytes, pus, etc., liberated in the peritoneum with or without adhesions. In this variety, perforation can take place directly into the peritoneal cavity and a general peritonitis be produced, in which there is no effort at limiting adhesions, the same as you find following gangrenous destruction of other portions of the body from infection in which there is an absence of the effort of limitation and a non-restricted advancement of infection.

Peritoneal Infections.—The first variety of infections without perforation I have mentioned under the head of ulceration of the mucous membrane. The second variety is the most common in disease of the appendix, a small circumscribed abscess as a result of perforation. The effect of this abscess in its subsequent course depends: 1, on whether there follows necrosis of the wall of the adherent intestine which protects the peritoneal cavity and the admission of the contents of the abscess into the intestine; or 2, whether the abscess is retained within the constantly dilating sac, producing a large accumulation always separated from the general peritoneum, and which can be treated surgically by a lateral incision without opening the unaffected portion of the peritoneal cavity; or 3, whether the abscess suddenly ruptures into the peritoneal cavity; or 4, whether the abscess opens into other of the neighboring viscera or cavities, as kidney, bladder (Case 82) or pleura.

The local, circumscribed peritoneal abscess is a source of danger: 1, from absorption; 2, from necrosis of the tissues forming its wall, that is, wall of the bowel, followed by hemorrhage and death (Case 54); 3, danger of rupture into the general peritoneal cavity; 4, thrombo-phlebitis, secondary abscess. (See Cases 10 and 26.)

General Suppurative Peritonitis—as a result of disease of the appendix is produced: *a*, by a direct perforation and emptying of contents of the appendix into the peritoneal cavity (many cases); *b*, by a rupture of a small circumscribed abscess that had previously formed around the appendix (Case 108); *c*, by infection through wall of appendix (many cases), and also abscess (Case 86); *d*, by a rupture of gangrenous appendix into peritoneal cavity. The result of the infections of the peritoneum, or general suppurative peritonitis, depends upon the pathologic changes produced by the infection on the surface of the peritoneum. We have, 1, a dry septic variety of peritonitis with more or less complete exfoliation of the endothelium of the peritoneum, which terminates fatally in a very short period of time, as in Cases 25 and 43. We have, 2, where the quantity of pus is considerable, a ptomaine poisoning from the immediate absorption of the quantity of pus poured into the peritoneal cavity, where the patient at the end of four to twelve hours after the rupture will die with the most profound symptoms of collapse from toxines. (See Cases 102 and 104.) We have, 3, an escape of a quantity of pus into the peritoneal cavity, generating a suppurative peritonitis. Of this variety there were thirty-six cases, with twelve deaths. In all of these the patient had no immediate manifes-

tations of collapse; in many the pulse was not above 90, temperature not above 100 degrees at the time of the operation, even in cases in which the surface of the bowel in one-half or three-quarters of the entire abdomen was covered with pus. This condition can exist four, five, six, or even seven days without producing the symptoms of collapse which are recorded in our text-books as occurring *immediately* from *infections* or *ruptures* into the peritoneal cavity. The symptoms of collapse come on in these cases *only after an absorption of the products of inflammation*, never primarily, and when they do come on the patients die within a very few hours after their onset. The symptoms of collapse in these cases always surprise the attending physician, as his patient before their onset is considered to be very far advanced in convalescence—indeed, if not cured, and this explosion surprises him like a thunderclap from a clear sky.

I will not go into the details of the clinical history of the many varieties of lesions and their sequences which I have now related, as you can readily understand how the course in the various pathologic conditions would differ. There is probably no disease in the abdominal cavity that produces such a multiplicity of manifestations, pathologic conditions, and variety of dangers as that of lesions of the appendix. In comparing the operative with the non-operative treatment all these pathologic conditions must be considered separately, otherwise we can draw no reliable conclusions as to the merits of various procedures. In order to do this, the symptoms of each lesion must be so distinctly and separately outlined that the lesion can be recognized by the medical man without operating, as well as by the surgeon operating. We will, therefore, now consider the symptomatology of appendicitis.

SYMPTOMATOLOGY.

Can we recognize the various pathologic conditions by the symptoms? Can we say from the symptoms, this is catarrhal appendicitis; this is peritonitis? *Emphatically, no.* What are the symptoms of acute catarrhal non-obstructive appendicitis? They are the symptoms of enteritis, usually accompany enteritis, with a slight increase in the local tenderness over the appendix. What are the symptoms of suppurative appendicitis with obstruction, that is, with retention products of infection within the appendix? Sudden attacks of pain in the abdomen, either localized to the right iliac region, or general, shortly followed by nausea and very frequently vomiting. Local tenderness most frequent, occasionally general, extreme tympanites, a pulse of from 120 to 130; temperature of from 104 to 105½ degrees; in fact, the classical symptoms of peritonitis, and still no peritonitis present. (See Cases 83 and 116.) The symptoms of ulceration of the mucous membrane without perforation are just the opposite to the preceding ones in intensity, being as a rule the same symptoms, but very mild and with specific ulceration, as typhoid and tubercular; they are also practically the same as the latter. (See Cases 46 and 30.)

In ulceration with perforation, we have, 1, a sudden attack of pain; 2, followed always by nausea and frequently vomiting; 3, increased localized tenderness in right ileus; and 4, a temperature of 102–103 degrees. These symptoms continue for three days. They may be accompanied by extensive tympanites and general tenderness. If the abscess remains circumscribed they will gradually subside, and at the end of a week the temperature will be 99½ to 100 degrees, pulse 90, absence of general tenderness, absence of tympanites, and only local tenderness present. But still there may be an abscess in the peritoneal cavity.

Gangrene of the mucous membrane has no special symptoms different from those just mentioned with ulcerative perforation, and can not be determined until the abdomen is opened and the appendix examined. There are following a perforation of the appendix no special symptoms, except a possible exacerbation of pain and an increased area of tenderness.

We have now considered the leading symptoms of the varieties of appendicitis, per se, without its complications, and we recognize four cardinal symptoms within the first forty-eight hours in every case: 1, sudden pain; 2, nausea and vomiting; 3, increased local tenderness over the appendix; and 4, elevation of temperature. These symptoms occurring in a healthy individual are pathognomonic of this disease and all that is necessary for its recognition. They are most marked and characteristic within the first forty-eight hours; therefore the diagnosis is most readily and positively made at that time.

Special care should be exercised in excluding females with history of genito-urinary infections.

The infections of the peritoneal cavity without perforation have no additional immediate symptoms to those of appendicitis without infection of peritoneum. *Infection of the peritoneum with perforation has immediately following the perforation no special symptoms above a circumscribed peritonitis, or a simple lesion of the appendix without perforation.*

The constitutional symptoms of a circumscribed abscess in the neighborhood of the appendix immediately on its formation are usually pain and vomiting, and elevation of temperature approximating 103 degrees. This continues for four or five days, subsides to 99½, or even 99 degrees, as long as the abscess remains circumscribed and does not open into the peritoneal cavity, or into the retro-peritoneal cellular tissue. Induration, increased local tenderness.

Diffuse General Peritonitis.—What are the symptoms of diffuse general peritonitis? If the members of this Congress were to answer that question from our text-books, or cases reported in our journals, they would say, *immediately*, that is, within a few hours after the infection—symptoms of tympanites, intense pain, collapse, particularly the latter would be present. I desire to call your attention to the symptom of collapse as a manifestation of peritonitis because it is misleading. We are taught in our text-books that the patient has *immediately* following a rupture into the peritoneal cavity of one of the viscera, or an abscess, particularly the latter, the manifestation of collapse. *I will state now that that symptom does not occur except under special conditions*, and I would warn the doctor who relies on the symptom of collapse as an immediate manifestation of perforation, that he is in error, except in cases of sapremia, as before mentioned, and that his erroneous idea on this subject will cost him the lives of many of his patients. The manifestations of rupture into the peritoneal cavity depend upon: 1, the character of the material entering the peritoneal cavity; 2, the quantity of

material; 3, the pathologic changes produced within the peritoneum by various substances; and 4, resistance offered by peritoneum. Examples of the first, when the substance admitted into the peritoneum is chemically irritating or poisonous, as gastric juice, fluid from hydatid cysts, cysts of the kidney, etc. As a result of these admissions into the peritoneal cavity, we have immediate manifestations; pain, tenderness, collapse. Examples of the second, where the quantity of material cuts an important figure. If the quantity of material be small, as of the substances mentioned in No. 1, as well as the admission of pus or the rupture of small abscesses into the peritoneal cavity, which we see in everyday practice, the immediate manifestations of their presence may be very limited and transitory. While if a large quantity be admitted, the rapid absorption, by the peritoneum of their toxines or ptomaines, produces rapid collapse and death without waiting for inflammatory reaction, the same as if a poisonous alkaloid were injected into the peritoneal cavity, as in Case 102. Examples of the third, where substances, small in quantity, but particularly septic in their nature, cause a peritonitis of greater or lesser severity, which peritonitis may assume the fulminating dry form so dreaded by all laparotomists, fortunately a form of rare occurrence and not amenable to treatment. Or the slow variety in which there is an accumulation of sero-purulent material which gradually increases in quantity and spreads over the surface of the bowel, producing but slight disturbance for a number of days until such time as the rapid absorption of the products of inflammation takes place, and the patient suddenly collapses and dies. The pus is guided in its advancement on the surface of the intestine by the position of the coil, as shown by formation of secondary abscesses on the opposite side of the abdomen and in the neighborhood of the kidney.

Errors in diagnosis occurred four times.

1. A perforating round ulcer of the stomach caused the peritonitis.
2. An extra nephritic renal calculus on right side.
3. Rupture of a psoas abscess.
4. Gangrene of entire mucous membrane of colon (diphtheritic colitis).

All cases, except the last, demanded immediate operation. It will be further noted that in every one of these four cases there was an absence of some of the cardinal symptoms.

In order to determine the advisability of operative interference, we must ascertain as near as possible: 1, what percentage of the cases terminate fatally that are not interfered with surgically? 2, what percentage of the same class of cases terminate fatally that *are* operated upon? 3, what are the additional dangers of the operation per se? It is estimated on good authority that from 27 to 30 per cent. of all cases treated medicinally terminate fatally sooner or later, if not operated. On that point I can not furnish statistics of my own as I operate on all cases. The percentage of deaths in our cases was 11 per cent., or 16 deaths in 141 cases.

In the first 100 cases we had a mortality of only 7 per cent. Since that, I lost three consecutive cases in as many days. The causes of death in our cases were:

1. Pyemia.
   1. Septic pneumonia.
   2. Septic phlebitis.
   3. Multiple infarcts.
2. Ptomaine poisoning. Rupture of large abscess into peritoneal cavity at time of operation.
3. Septic peritonitis. Thirteen existed before operation; *Thirty-six cases of general septic peritonitis operated.* I consider the dangers of the operation comparatively nil in competent hands.

What operation should be performed? In early cases the lateral incision over the most common seat of the appendix, in the right iliac fossa, should be given the preference. In late cases the incision sheuld always be over the most prominent portion of the induration. In this class of cases the appendix is removed only when it presents itself palpably in the wall of the abscess and can be removed without rupturing the adhesions which separate the abscess from the uninfected portion of the abdomen. In early cases always remove the appendix, as it is the only certain means of preventing recurrence. I had eleven cases of recurrence in which the appendix was not removed at the primary operation; six of these were re-operated upon early in their first recurrence, appendices removed, all recovered. We never use fluid of any kind in the peritoneal cavity, pus or no pus.

When should we operate? On every case of appendicitis, or better, on every case where we have present the four cardinal symptoms:

1. Sudden attack of pain over appendix.
2. Always nausea, frequently vomiting.
3. Elevation of temperature.
4. Exaggerated local tenderness in various positions occupied by the appendix.

In every case in which the above symptoms were present, including every case on which we operated, except those mentioned as errors, we found pus, gangrene, or proof that it had previously existed within or about the appendix. In one case, in which elevation of the temperature was absent, the mucous membrane of the appendix was ecchymotic. The operation should be performed at the earliest possible moment after the onset of the symptoms: 1, because, at that time, the inflammation is limited; 2, the appendix is easily located and removed; 3, the time for rupture into the general peritoneal cavity has not occurred; 4, the gangrene of the bowel in the neighborhood has not taken place; 5, Matterstock states that upwards of 50 per cent. of the mortality from disease of the appendix occurs before the sixth day. It is therefore evident that the operator who waits to operate as late as the sixth day will lose 50 per cent. of all the cases that would terminate fatally without operation. I desire to urge upon you: 1, that you operate on all cases; 2, that you operate early, so as to prevent the disastrous effects of a rapidly spreading disease in the peritoneal cavity, and save yourself the humiliation of performing an antemortem operation.

Case 1.—Date of operation, Nov. 9, 1885. Operator, Dr. J. B. Murphy. L. E., aged 24 years; male. Cook County Hospital. History: Two weeks before operation, patient began to feel pain in right iliac region and in lower part of abdomen; nausea, vomiting and elevation of temperature. He noticed a swelling in right iliac region which gradually increased in size up to the time of operation. Operation: Incision over highest point of induration; drainage of abscess cavity; general peritoneal cavity not opened. Appendix was not removed. About twelve ounces of pus escaped. Patient made a rapid recovery.

Case 2.—Date of operation, March 2, 1889. Operator, Dr. Murphy. L. Z., aged 19 years; male, Cook County Hospital.

History: Patient has been sick for three weeks with the usual symptoms of appendicitis, at the time of entrance into Hospital. Some induration present. Temperature 99 degrees. Diagnosis: Appendicitis with perityphlitic abscess. Lateral incision directly into the abscess. General peritoneal cavity not opened. A fecal stone the size of a bean escaped in the pus. The appendix firmly imbedded in a mass of induration was not removed. Recovery.

Case 3.—Date of operation, March 22, 1889. Operator, Dr. Murphy. Mrs. O. D., aged 35 years; female. History: Typical attack began March 1. Severe symptoms of peritonitis were manifested on the 7th. Patient had fever, sweats and evening elevation of temperature until time of operation. Abdomen greatly distended; induration extended from right side beyond the median line to the left. Abdomen tympanitic over induration which was explained by presence of gas in the abscess cavity. Operation: March 22, three weeks after onset of attack. Lateral incision; about two quarts of very offensive pus escaped. The bowels were covered with a thick layer of fibrin. Drainage (rubber tube); recovery.

Case 4.—Date of operation March 25, 1889. Operator, Dr. Murphy. L. G., aged 14 years; female. History: On the 18th patient complained of pain in the right iliac region followed by vomiting. Temperature 102 degrees. March 19 temperature 99½ degrees, pulse 90. Tenderness increased in right iliac region vesical tenesmus. These symptoms continued without an elevation of temperature above 99½ degrees until time of operation. The induration was about the size of a hen's egg. Operation: Lateral incision into abscess. General peritoneal cavity not opened. Appendix not removed. Drainage; recovery.

Case 5.—Date of operation April 10, 1889. Operator, Dr. Murphy. Mr. X., aged 55 years; male. Case occurred in practice of Dr. Hicks of Burlington, Wis. Patient had a typical attack of appendicitis six weeks ago. Since then has been confined to bed with fever, sweats, pain and tenderness in right iliac region. Dr. Hicks pronounced the case one of perityphlitic abscess, and on the following day Dr. Murphy assisted by Dr. Hicks performed the operation. Operation: Lateral incision; general peritoneal cavity not opened; large quantity of very offensive pus escaped. The abscess extended down into the pelvis. No foreign body, no fecal stone. Drainage; recovery.

Case 6.—Date of operation May 3, 1889. Operator, Dr. Murphy. T. B., aged 13 years; male. History: April 25, 1889, patient came to my office complaining of pain in right iliac region. Examination: On examination no swelling could be detected: no elevation of temperature. He presented himself again May 3, with pinched anxious expression of countenance; pain, swelling and tenderness in right iliac region. No fluctuation, no symptoms of phlegmon in the abdominal wall. Temperature 102 5-10 degrees, pulse 128. Diagnosis: Perforated, perityphlitic abscess. Operation: Lateral incision; the induration had lost its resistance under the anesthetic; peritoneal cavity opened; an abscess found in the retro-cecal region. Fecal stone size of a Lima bean. The appendix had been amputated at its base by an ulcer; the body of the appendix retained its vitality by adhesions to the cecum; removed, drained. May 4, temperature 99 degrees, pulse 120, vomiting constantly. May 5, temperature 101.4 degrees, pulse 136. Still vomiting, countenance pinched and anxious, delirious; very tympanitic over entire abdomen. Died same day. General septic peritonitis.

Case 7.—Date of operation May 16, 1889. Operator, Dr. Lee. D. L., aged 19 years; male. Patient's attack began May 10 with severe pain in right iliac region accompanied by nausea and vomiting; these symptoms continued and constantly increased until May 13, when the pain extended all over the abdomen, but the greatest sensitiveness was in the right iliac fossa. Induration could be felt there without the signs of fluctuation or phlegmon, May 16. General amelioration of symptoms, pulse 84, temperature 99 degrees. Operation: Lateral incision, no infiltration of sub-peritoneal tissue. Intra-peritoneal abscess opened, drained; appendix adherent its entire length along the wall of cecum. Drainage; recovery.

Case 8.—Date of operation June 23, 1889. Operator, Dr. Murphy. H. R., aged 26 years; male. On June 18 patient was seized with pain in right iliac region, nausea, vomiting and constipation. At the end of twenty-four hours the symptoms became those of general peritonitis. Examination: On the third day distinct induration could be felt in right iliac region extending half way to umbilicus. No induration from rectum. Operation consented to on fifth day. Operation: Lateral incision. When the peritoneal cavity was opened, to my great surprise it appeared perfectly healthy. No adhesions to anterior abdominal wall. The large induration which before operation seemed to extend to the umbilicus had disappeared. A careful examination revealed an induration mass close to the spinal column to the left just below the level of the umbilicus. The adhesions were gently separated, and an abscess opened; inserted drainage tube, packed about with iodoform gauze; recovery. This case illustrates how deceptive the sign of induration may be in the acute stage. It appeared to be in this case close to the abdominal wall in front and when the peritoneal cavity was opened it was found located at the posterior wall. The induration always appears larger than it actually is. This difference being most marked in the first few days of the attack.

Case 9.—Date of operation Aug. 9, 1889. Operator, Dr. Murphy. Mrs. N., aged 56 years. History: Patient had complained of pain and discomfort in right iliac region two weeks previous to Aug. 4, 1889. At this time pain became very intense, and a doctor was called at midnight to relieve her. Nausea, vomiting, great abdominal pain and tenderness and depression. These symptoms continued for four days. A consultation was called and an operation decided upon. The patient was extremely obese; no induration could be detected either from without or from the rectum. Operation: Lateral incision, directly into abscess; about an ounce of pus (very offensive) escaped and with it a small fragment of bone. General peritoneal cavity not opened. Rapid recovery.

Case 10.—Date of operation Aug. 16, 1889. Operator, Dr. Murphy. F. F., aged 56 years; male. Case occurred in practice of Dr. Volini. History: On August 16 patient was seen in consultation with Dr. Volini who had made a diagnosis of perityphlitis and gave the following history: Three weeks ago patient was attacked with severe pain in abdomen followed by nausea, vomiting and high fever. Pain rapidly extended over entire abdomen and the patient became very tympanitic. The tympanites and general abdominal pain subsided in four or five days, but the sensitiveness and induration remained in the right iliac region up to time of operation. The patient's temperature was then 99 degrees (in the morning), but the attending physician stated that in the evening the temperature was very high and followed by sweats. The patient was very much emaciated and presented all the appearance of a typhoid in the third week. Diagnosis: Peri-appendicitis (circumscribed abscess). Operation: Lateral incision, general peritoneal cavity opened, circumscribed abscess evacuated; drainage,

Aug. 17,	temperature	99½	degrees.	
Aug. 20,	"	100½	"	
Aug. 20,	"	102	"	
Aug. 21,	"	100½	"	
Aug. 22,	"	99½	"	
Aug. 26,	"	101½	"	
Aug. 27,	"	101	"	
Aug. 28,	"	102	"	
Aug. 30,	"	100 8-10	"	evening.
Aug. 30,	"	99 8-10	"	morning.
Aug. 30,	"	101 8-10	"	evening.
Aug. 31,	"	102	"	morning.
Aug. 31,	"	103½	"	abscess burst through.
Sept. 1,	"	normal		A. M.
Sept. 1,	"	103½	"	P. M.
Sept. 1,	"			midnight chill.
Sept. 2,	"	102½	"	
Sept. 2,	"	102	"	
Sept. 3,	"	102½	"	A. M.
Sept. 3—3 P. M. died.				

A second abscess was opened posteriorly on the 29th of August. Patient had chill Sept. 1, with pulmonary symptoms; from that time he continued to sink and died Sept. 3. Autopsy revealed embolic pneumonia of lower lobe of right lung. Sero-purulent fluid in right pleural cavity. Lungs otherwise normal, heart and liver normal. Remains of primary abscess in neighborhood of vermiform appendix which was opened in the first operation. Down in the retro-peritoneal cellular tissue a second abscess cavity was found which had been opened in the second operation; from this abscess he received his fatal pyemia. No peritonitis; no infarcts in any of the other organs. Head not examined.

Case 11.—Date of operation Oct. 1, 1889. Operator, Dr. Hartman. S. W., aged 10 years; male. History: Patient was taken sick with a typical attack many months before; the abscess was aspirated and finally external fistula formed. The patient improved, was up and about, but a mucus dis-

charge continued from the sinus. Operation: A laparotomy was performed; peritoneal cavity opened; fecal stone at the base of the sinus was removed from the appendix which was adherent to the abdominal wall and cecum; the appendix was not removed but its mucous membrane was curetted. Uneventful recovery.

Case 12.—Date of operation, Dec. 17, 1889. Operator, Dr. Lee. I. D., aged 22 years; male. History: About Dec. 3, 1889, patient was taken suddenly ill with pain in right iliac region accompanied by faintness and vomiting. These symptoms continued for two weeks together with fever and sweats. Examination: On examination was found a large circumscribed induration in right iliac region. Temperature 102 degrees, pulse 120. Operation: Fourteen days after onset. Lateral incision. Peritoneal cavity opened, contained a serous fluid and was very much congested. Large mass of adherent intestines could be seen. On separating these, a pus cavity was opened and drained. Pulse and temperature rapidly fell to normal and patient made a speedy recovery.

Case 13.—Date of operation, Jan. 16, 1890. Operator, Dr. Murphy. D. L., aged 20 years; male. History: Had an operation in May, 1889, for drainage of a perityphlitic abscess. Present attack typical; local pain, vomiting, fever, tenderness and induration. Operation: Fourth day after onset. Drainage of a circumscribed abscess. Appendicisectomy. Recovery. (See history Case 7, May 16, 1889).

Case 14.—Date of operation, Jan. 26, 1890. Operator, Dr. Murphy. R. W., male; aged 26 years. Occurred in practice of Dr. Devlin. History: Patient's sickness commenced with a typical attack January 19. January 20, temperature 101 degrees; symptoms continued. January 21, temperature 102 degrees; induration detected in right iliac region. Operation advised. From January 22 to 24, temperature ranged from 101 degrees to 102⅕ degrees; pain and tenderness increased and induration extended to above the crest of the ileum. January 25, temperature 103½ degrees. January 26, operation: Lateral incision into pus cavity; general peritoneal cavity not opened. Appendix not removed. Half a pint of pus evacuated; drained. January 27, temperature normal and remained there; recovery.

Case 15.—Date of operation Feb. 28, 1890. Operator, Dr. Murphy. T. McC., aged 29 years; male. Patient had had twenty attacks previous to this. History: One week prior to operation patient had a typical attack of appendicitis. Symptoms continued accompanied by a temperature of 103 degrees up to the time of operation. Pulse 120. Operation: Lateral incision; a large pus cavity opened, without opening the general peritoneal cavity: About twenty ounces of pus escaped. Appendix not removed. Second day after operation fever had permanently disappeared. This case recurred but was not operated.

Case 16.—Date of operation, March 27, 1890. N. La B., male; aged 26 years. Operator, Dr. Murphy. Cook County Hospital. When patient was admitted to Hospital a slight induration could be felt in right inguinal region. There was great tenderness in the region of induration. Patient says he had a similar attack about three years ago. Temperature at time of operation 100 degrees. Operation: Five days after beginning of attack. Usual incision. Appendix found encircled and adherent to omentum. Appendix loosened from adhesions and amputated; it was large and swollen, the size of a man's little finger. The stump was cauterized and top sewed. No pus in peritoneum. Iodoform gauze packing. Pus was found in appendix; recovery.

Case 17.—Date of operation June 11, 1890. Operator, Dr. Murphy. Wm. H., aged 20 years; male. Cook County Hospital. Patient was transferred from medical side of Cook County Hospital to surgical side for operation.

Operation: Typical incision. The appendix was located, ligated and amputated; the stump top-sewed with silk. The abdominal cavity was closed without drainage. The appendix contained enterolith and pus. Patient made a rapid recovery.

Case 18.—Date of operation June 25, 1890. Operator, Dr. Murphy. Miss W. Richmond, aged 27 years. Presbyterian Hospital. History: For the past four years the patient has had recurrent attacks of severe pain in abdomen which came on suddenly, continued for several days and was followed by a soreness of some days' duration. Present illness, patient was taken sick on May 12, 1890, with an attack far more persistent.

Case 19.—Date of operation June 26, 1890. Operator, Dr. J. B. Murphy. Rev. G., aged 40 years; male. On June 23 patient was seized with griping pains in right iliac region which gradually increased, accompanied by vomiting. Pulse that evening 120; temperature 102 degrees. Localized tenderness; induration; general tympanites.

Operation: Appendicisectomy. Appendix non-adherent, gangrenous, not perforated. The serous coat of the appendix was stretched over the gangrene débris of the mucous membrane and pus; it was not protected by adhesions except by omentum at base, and rupture was imminent. There was no infection of peritoneum. How different the condition would have been twenty-four hours later; the appendix would have been ruptured, a septic peritonitis developed as there was no protecting adhesions, and the patient's life would have been greatly jeopardized if not sacrificed. Rapid recovery.

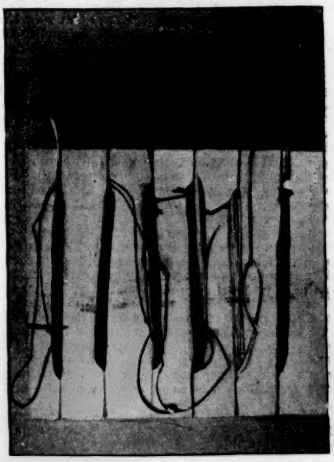
Case 20.—Date of operation July 15, 1890. Operator, Dr. F. S. Hartman. Mrs. B. Typical attack; pain, vomiting, temperature and slight induration over crest of ileum, posteriorly. Operation: The operation was performed two weeks after onset of attack. Incision over crest of ileum, posteriorly; drainage of a circumscribed abscess. Appendix not removed. General peritoneal cavity not opened; recovery rapid.

(To be continued.)

A SUGGESTION AS TO THE CARE OF SILK SUTURES DURING OPERATIONS.

BY GEORGE F. KEIPER, A.M., M.D.
EYE AND EAR SURGEON TO ST. ELIZABETH HOSPITAL. LA FAYETTE, IND.

The ordinary method of sterilizing silk sutures is to put needles and silk in boiling water. Result, tangling of the different sutures and vexation in their separation. To overcome this, manufacturers



have put before us reels of silk in bottles containing an antiseptic solution. The ends are brought out through rubber corks. They are thus always kept sterilized. The needle is supposed to be threaded by this sterilized silk, but it would be hazardous to use it in living tissues unless both are sterilized after threading. This puts us where we usually begin, and the result is, to be safe, we must again sterilize the silk.

The accompanying photograph explains a method of caring for sutures; this I have used for two years. It is impossible for them to tangle. The needles are threaded and wound on an ordinary card, which is nicked the better to receive and hold the sutures.

They can thus be prepared and kept on hand ready for any operation. At the time of operation as many as may be necessary may be cut off and thrown into the sterilizer. When the surgeon is ready for one, it is simply unwound. Another advantage presented by this suggestion is that a separate receptacle for sutures is unnecessary.

SOCIETY PROCEEDINGS.

American Electro-Therapeutic Association.

The Third Annual Meeting Held in Chicago, Sept. 12, 13 and 14, 1893.

AUGUSTIN H. GOELET, M.D., President.

(*Continued from page 273*).

THIRD DAY—SEPTEMBER 14—MORNING SESSION.

Discussion of yesterday concluded.

THE GRAPHIC STUDY OF ELECTRICAL CURRENTS IN RELATION TO THERAPEUTICS.

By J. H. KELLOGG, M.D. of Battle Creek, Mich.

Something more than a year ago M. D'Arsonval, assistant to Prof. Brown-Sequard, the eminent Parisian physiologist, presented at a Conference of the French Society of Physics, a paper in which he described an alternating magneto-electric current to which he applied the term "sinusoidal." This current he obtained from a small magneto-electric machine modeled after that of Clarke, which consists of a vertical electro-magnet and another electro-magnet so placed as to revolve upon a horizontal axis in such a manner that the extremities of the electro-magnet move in a plane parallel to the branches of the vertical magnet. This machine, and others of its type, as originally constructed, were furnished with an interrupting arrangement which reversed the current at the moment of highest potential. By a suitable modification in the mode of construction, D'Arsonval secured from the machine a current in which the rise and fall of potential was uniform from zero to the maximum and back to zero again, and in both directions. This fact he learned by a study of tracings obtained by means of a special device constructed by him for the purpose. These curves he presented with his paper, and I presented a reproduction of them in connection with a paper which I read before this Association at its last session.

I was very forcibly struck by the description given by D'Arsonval of the physiologic effects of this current, as they seemed to tally so exactly with the effects which I had first obtained a number of years previous with a magneto-electric machine with which I was led to experiment in the course of a series of investigations which I was making with a large variety of electrical appliances of various descriptions. I first described this current in a paper read before the AMERICAN MEDICAL ASSOCIATION in 1888. The peculiarity of this current to which I then called attention was that it was capable of producing energetic and painless muscular contractions, and that it was also a most effective means of stimulating the nutrition of the parts to which it was applied. In concluding my description of the current, I stated as follows: "The therapeutic results following the use of this current justified me in claiming for it a decided superiority over any other form of electrical current for this purpose (that of exciting muscular action). I have used this current for medical purposes for the last five years." In the following year I described the current again in a paper read before the American Association of Obstetricians and Gynecologists.

The publication of D'Arsonval's graphic representations of currents of regular and irregular variation led me to undertake a similar study of the current produced by the electro-magnet apparatus to which I have referred. Although recognizing the peculiarity of the current which I had discovered, and which had led me to utilize its therapeutic properties for a number of years and with excellent advantage, I was quite at a loss to understand its peculiar qualities. I showed the machine to Dr. E. Betton Massey of Philadelphia, and other medical electricians, who, like myself, were struck with its peculiar properties, but were unable to explain the reason of its peculiarities.

In order to obtain a tracing of the current, I improvised an electrograph by attaching a writing lever to the solenoid of a large and very delicate galvanometer. The curve which I obtained by this means encouraged me to persevere. I accordingly undertook to make a more delicate machine, the construction of which, although different from that of

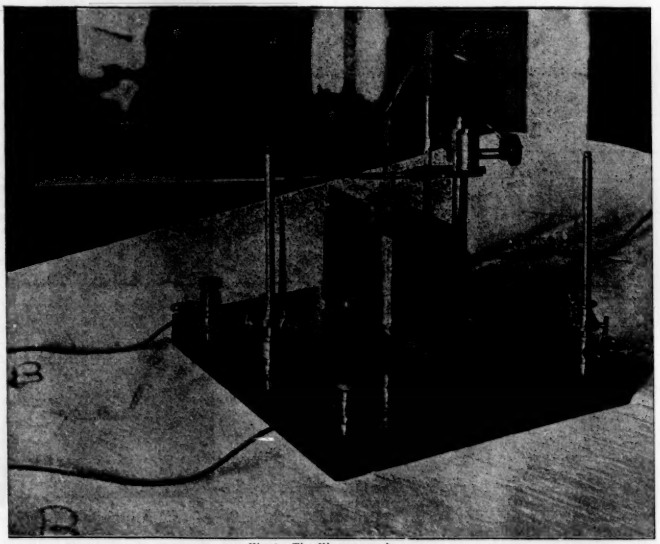


Fig. 1. The Electrograph.

D'Arsonval's, was suggested to me by the description of his apparatus. (See Fig. 1.) The construction is as follows:

A, B, C, and D, Fig. 2, represent the several portions of a soft iron frame. On the two arms, D and E, are mounted two solenoids (E, E), each wound with 106 feet of copper wire of the diameter .032 inches. The two solenoids are connected, and the terminals (K, K), when the instrument is in use, are connected with the poles of the battery, thus producing an electro-magnet, of which A constitutes one pole, and B, B, the other. The arm A is cylindrical in form, and the terminals B, B, are semicircular at their ends, so as almost completely to embrace the arm A, thus producing an annular magnetic field. A small solenoid composed of 10.5 feet of very fine copper wire (.005 inches in diameter) is placed at F. The current to be tested is passed through this solenoid by making proper connections with the terminals (L, L). When a current is passing through the coils E, E, thus producing a magnetic field about the solenoid F, a current flowing in one direction through F, will cause it to be lifted up, while a current passing in the opposite direction will cause it to drop down below the level to which it is held by the spring I. The writing arm G, is attached at one end to the brass post H, the other end being free. A small standard connects it with the solenoid F, which, acting upon the short arm of the lever, produces even with a very slight movement of the solenoid, a considerable movement of the long bamboo lever, the free end of which rests against the smoked surface of a revolving cylinder.

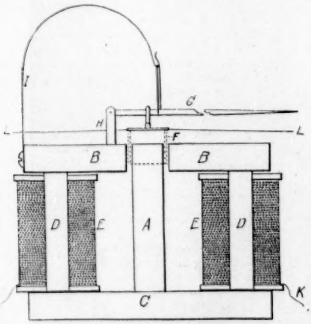


Fig. 2. Section of Electrograph.

By means of this device, the most delicate variations in an electrical current may be instantly recognized and recorded by means of a kymographion, in the same way in which tracings are taken from a recording tambour.

By means of this instrument, I have taken a large number of tracings of different forms of electrical currents. Being especially interested in the sinusoidal current, I naturally first gave my attention to this, and obtained the beautiful tracing shown in Fig. 3.

The physiologic effects produced by the sinusoidal current which are most characteristic of it, are 1, its painlessness; 2, its great penetrating power. D'Arsonval has shown that the intensity f the motor, or sensory reaction produced by a given current is proportional to the variation of potential at the point excited. The constant alternation of the current prevents polarization of the tissues acted upon, and hence maintains the maximum exciting effect.

That important physiologic significance must attach to the *mode* of variation in potential, as well as to the *amount* of variation is clearly evidenced by the difference in the effects occasioned by the gradual or sudden withdrawal of the current in making an application of galvanic electricity, which is familiar to all medical electricians.

In the use of the sinusoidal current from my apparatus, different effects are observed, according as the machine is rotated slowly or at a high rate of speed. When rotated slowly and connected with sponge electrodes held one in each hand, vigorous contractions are produced in each arm, and in alternation, nearly all the muscles of the arm seeming to participate in the contractions. When one electrode is placed in contact with the feet and the other held between the two hands, the muscles of both extremities are made to contract vigorously. The contraction is spasmodic rather than tetanic in character. By proper adjustment of the current, strong muscular contractions may be induced without producing the slightest sensation in the skin, and without any pain sensation whatever. With one electrode placed in the rectum, or the vagina, and the other upon the abdomen, strong contractions of the abdominal muscles may be produced, and even of the muscles of the upper thigh, without any sensation other than that of motion. I have frequently seen patients, while taking this current, shaking so vigorously under its influence that the office table was made to tremble quite violently with the movement.

With rapid rotation of the machine, the current obtained is capable of producing strong tetanic contractions similar to those of the faradic machine. This difference is noticeable, however: with the electrodes held in the hands, and the muscles of the forearm thrown into violent tetanic contractions by running the machine at a high rate of speed, the patient can, if he desires, release the sponges at any moment; the only skin sensation produced by an application sufficiently strong to induce tetanic contractions, is a slight prickling, very much less intense than that produced

Fig. 3. Graphic representation of the sinusoidal current obtained from magneto electric apparatus employed by the author since 1881.

by a faradic current capable of exciting equally strong motor effects.

The sensory effects produced by the current are exceedingly interesting. As has been already stated, applications of the current sufficiently strong to produce vigorous muscular contraction are attended by no sensory effects whatever. The sensory effects are best obtained by giving the machine a high velocity. Adjusting the apparatus for high velocity, and applying the sponge electrodes, well moistened, to the temples with a gradually increasing current, and with the eyes closed, one seems to see rotating waves of light, resembling a luminous whirlpool, in the region of each electrode.

It is a curious fact that the position of this luminous field is not stationary; it moves with the electrode which seems to be the center of the illuminated area. As the current is increased in strength, the display of light increases in brilliancy, finally becoming so extended and intense that the whole front portion of the head seems to be brightly illuminated. At this point, one begins to experience very slight prickling sensations in the skin, which increase as

the intensity of the current is increased. A remarkable characteristic of the current is, that so strong impressions are made upon the optic nerves, or their centers, by a current too delicate to be recognized by the nerves of the skin. This effect must be due to the great penetrability of the current.

Duchenne showed, in his masterly work published during the siege of Paris, that there is a decided difference in the physiologic properties of the currents obtained from the first and the second helix, and that these currents have very different clinical applications. The current of the second helix was found to possess much greater penetrating power than that of the first helix. The currents of the two helices differed, according to Duchenne, just "as water that is warm differs from water that is boiling, or as iron slightly warmed differs from iron that is white hot," as regards their influence upon sensibility. This fact is only cited as an analogous observation, since the sinusoidal current possesses properties very different from those of any induced current with which I have ever experimented.

The therapeutic indications for which I have employed the sinusoidal current have been based upon the peculiar motor and sensory effects which I first observed ten years ago, and some of which have since been observed and described by D'Arsonval and Apostoli.

Within the last ten years I have made more than twenty thousand applications of the sinusoidal current, having used the machine exhibited with the paper since 1883. Twelve thousand of these applications have been made within the last two years. The greater number of the applications have been made in gynecologic cases, although hundreds of applications have been made in cases not belonging to this class. The uses for which I have found the current most valuable are:

As a means of exercising the muscles, particularly muscular groups which can not be easily brought into isolated action by voluntary effort, and in cases in which, through injury of the nerves or nerve centers, or through disability of some other organ, exercise by voluntary effort has been impracticable.

I have found this current available as a means of producing muscular contraction in cases in which degenerative changes had advanced so far as to destroy the reaction to the faradic current. I have also found the current of great value as a means of securing passive exercise in connection with the rest-cure, in which respect its superiority over faradism applied as prescribed by S. Weir Mitchell is incontestible. I have used for many years, and still use, the faradic current, applying it to the various motor points of the body in such a manner as to secure vigorous muscular contraction as a means of exercise in feeble patients, but I have found the sinusoidal current very greatly superior to the faradic current for this purpose, by reason of the painlessness of the applications and the greater vigor of the contractions which are obtainable. With the faradic current it is often difficult to obtain strong contractions, especially in fleshy persons, and in many cases almost no contraction at all can be obtained without the application of a current of such strength as to be almost unbearable in consequence of the pain produced; and the services of a person skilled in locating the motor points are necessary for its special application in a majority of cases. With the employment of the sinusoidal current, these difficulties disappear entirely. It is only necessary for the patient to grasp the sponge electrodes in his two hands, to secure vigorous contraction of all the muscles of the arm, or with the patient holding an electrode in one hand, the attendant may apply the other sponge to the upper part of the arm, or the shoulder, and thereby secure the most vigorous contractions of all the muscles of the arm operated upon. By a similar application of one sponge upon one side of the abdomen, and the other upon the other side, or one sponge at the lower extremity of the back, and the other at the upper extremity, vigorous contraction of all the intervening muscles is easily secured without taking the trouble to seek out the motor points, and no matter how great the quantity of overlying fat.

I find this current exceedingly valuable as an alternate treatment to be employed in connection with massage. It is not a substitute for massage, but it secures an activity of the muscular structures which can not be accomplished by any form of passive exercise.

The special use for which I have found the slowly alternating sinusoidal current of greatest advantage, has been, as a means of strengthening relaxed or undeveloped abdominal muscles in gynecologic cases. I long ago learned that a great share of the long category of symptoms complained of by women suffering from so called female weakness, such as "backache," "dragging sensations," "weakness," etc., are due, not to primary pelvic disorders, but to a relaxed condition of the abdominal walls resulting in what Trastour terms "desequilibration," or disturbance in the static relations of the abdominal viscera. Relaxed abdominal walls allow the stomach, bowels, liver, kidneys, spleen and other viscera to become pendant; and a constant drag upon the branches of the great sympathetic which are distributed to these organs results in congestion and irritation of the great abdominal brain, as the semilunar and associated ganglia of the great sympathetic have been aptly termed, and through the morbid reflexes thus set up, give rise to a multitude of painful and neurasthenic symptoms, which render miserable the lives of thousands of women who are really not suffering from any disorder of the pelvic organs whatever, although perpetually under treatment for some imaginary prolapsus, or anteversion, or ovarian irritation, or other pathologic myth.

By strengthening the abdominal muscles, and thus replacing the prolapsed abdominal viscera and restoring the normal abdominal tension, so that the portal circulation recovers its normal tone, I have succeeded in curing hundreds of invalid women who had previously sought relief in vain at the hands of many gynecologists, and in the accomplishment of this, I am certain that the sinusoidal current has played a very important rôle. I find this current especially valuable at the beginning of the treatment of these cases, before the patient has acquired sufficient strength, or sufficient confidence to engage in active gymnastic exercises, or to be subjected to active or active passive exercises of the Swedish movement system, which I always utilize as a means of accomplishing a thorough-going and permanent cure.

I also find the sinusoidal current of great value as a means of after treatment in cases in which I have found it necessary to shorten the round ligaments, or to perform other gynecologic operations for the correction of displacements of the pelvic viscera not curable by non-surgical means. The neglect to employ these and other measures for developing the normal supports of the uterus and ovaries is, I am satisfied, one of the causes which has led to the general failure of the operation for shortening the round ligaments, in the hands of American gynecologists. I have performed this operation more than three hundred times, and with less than 5 per cent. of failures—scarcely a single failure in fact within the last four years since I have perfected the technique of my own method of operation. By the employment of a slowly alternating sinusoidal current for a few weeks after the operation, the abdominal muscles are developed so that they are able to hold the small intestines out of the pelvis, and thus relieve the pelvic viscera.

In cases of facial paralysis, this current affords an admirable means of exercising the muscles and stimulating the nutrition of the paralyzed structures, as one can pick out the affected muscles and put them into rhythmical action with very great facility. In the treatment of spinal curvatures due to weakness of the muscles of one side, or irregularities of muscular development, this current is also invaluable. With one pole applied to the feet and the other to the two hands, vigorous movements affecting nearly all the muscles of both extremities, are easily produced. The current affects involuntary as well as voluntary muscles. It is of great service in a case of constipation, one pole being applied to the rectum and the other to the abdominal muscles. It serves a double purpose in cases of this kind, awakening the vital activities of the rectum, and at the same time rapidly increasing the strength and efficiency of the abdominal muscles.

I have also found it of great service in cases of dilatation of the stomach. By means of a stomach electrode, which I have had constructed for the purpose, with one pole applied internally, the other externally, vigorous contractions are readily produced. I have verified this in several ways. After the current is turned on, one can easily detect the active peristaltic movement by listening over the region of the stomach with a stethoscope. The most positive evidence is afforded, however, by the fact that the stomach diminishes in size. I have sometimes noted an upward movement of the lower border of the stomach during a single treatment, amounting to fully two inches. No painful sensation is produced by the current, even when quite strong. I have, in some instances, increased the strength of the current sufficiently to enable me to obtain the most indubitable evidence of contraction of the organ in the forcing out of the stomach contents through the tube, or along the side of the

tube containing the electrode. This effect is always produced when the current is made sufficiently great. The ejection of the stomach contents is not accompanied by nausea, and ceases the instant the strength of the current is lessened, beginning again when the current is increased. I have used this current to the most excellent advantage in many cases of motor insufficiency of the stomach, with and without dilatation.

The fact that such profound motor and sensory effects can be produced without the ordinary shocking, prickling, and other sensations, is a grateful surprise to the patient, and certainly enhances its value as a therapeutic means.

I have found no electrical application so valuable as a means of relieving a hyperesthetic condition of the abdominal sympathetic ganglia, especially the semilunar ganglia, the lumbar ganglia, and the lumbo-aortic plexus of the sympathetic. It is equally efficacious in relieving pains beneath the shoulder blade and in the back, which are often erroneously attributed by patients to a diseased liver, but which are due, in a great majority of cases to a congested and irritated condition of the abdominal sympathetic ganglia.

Fig. 4. Current from Faradic apparatus. (McIntosh). A, make; B, break.

Fig. 5. Fluctuating current (intervals indicated by time marking represent 1-280 seconds each).

A rapidly alternating sinusoidal current is one of the most efficacious means with which I am acquainted for the relief of the peculiar sensation known as "heaviness," of which dyspeptic patients often complain. This sensation is due to a perverted condition of the sensory nerves of the stomach. Its relief by a rapidly interrupted current is an evidence of the penetrating power of this current.

The rapidly interrupted current may be applied to the stomach either externally by means of a flat sponge electrode, one over the stomach and the other over the spine opposite, or internally by means of a properly formed electrode placed inside a stomach tube, with a flat sponge electrode either over the stomach or the spine opposite the stomach. I have applied the sinusoidal current in this manner in a large number of cases for the relief of stomach symptoms, especially in cases in which examination of the stomach fluid by the method of quantitative analysis, which I have elsewhere described, showed deficiency in that form of stomach work which consists in the combination of free chlorin with albumen as shown by the diminished amount of the combined albumen.

The physiologic laws which govern the various chemico-vital processes of stomach digestion are certainly not fully understood, but that they are under more or less direct control of the nervous system, and especially of the sympathetic nervous system, particularly that portion known as the solar plexus, will probably not be disputed. The sinusoidal current seems to act by promoting a normal condition of the sympathetic, and its relations to the stomach thus facilitates the combination of the chlorin with albumen in the conversion of albumen into peptone.

Fig. 6. Improved sinusoidal apparatus designed by the author, giving two distinct currents.

An equally interesting fact, which has been observed in a number of cases, is the action of the current in promoting an improved value in the quality of the digestive product. In the method of examining stomach fluid referred to, an inferior quality in the product of peptic digestion is shown by the diminished value of coëfficient a. An application of the sinusoidal current seems not only to promote the quantity of combined albumen, but to improve its quality.

In the employment of the sinusoidal current for its effects upon the nervous system, I have found a current of high velocity most useful. The potential of this current is so

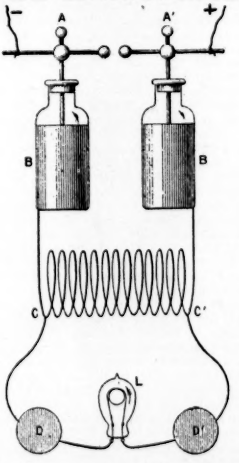


Fig. 7. Arrangement of Leyden jars for producing alternating currents of great frequency (d'Arsonval-Hertz).

great it can be used only by the aid of a very excellent and well graduated rheostat of large resistance. When judiciously employed, I find it more effective than any other form of electrical current in the relief of pain and all other symptoms arising from a hyperesthetic state of the nerves or nerve centers. I have found it especially serviceable in the relief of pelvic pains and the various forms of headaches. It is also especially valuable in the relief of various disorders of sensation included under the general term, paresthesia. The pe-

culiar numb, tickling, crawling and other sensations of which neurasthenic patients often complain, are almost certainly relieved by it. The same is true of the great variety of peculiar head symptoms complained of by neurasthenic patients—and women suffering from pelvic disease. Most of these symptoms, I am satisfied, are the result of reflex disturbance of the abdominal sympathetic, which I believe is especially favorably influenced by the sinusoidal current.

By careful management the electrodes may be applied to the head, and a current capable of producing decided effects passed through the brain in different directions without the slightest pain or other than the most agreeable sensations. I have never seen the slightest unpleasant effect from the application of this current, while it is not an uncommon thing to find patients who seem to possess an idiosyncrasy against the faradic, and in some instances, although much less frequently, against the galvanic current. In a good many thousand applications I have never yet found a patient who has experienced any ill effects from the application of the sinusoidal current. The only inconvenience I have ever observed, has been an occasional muscular soreness when a too vigorous or too prolonged application of the slowly alternating current had been employed, but this is only the effect of the gymnastics, and should not be attributed to the electrical current *per se*.

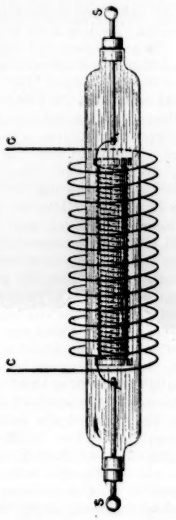


Fig. 8. Solenoid and coil for use in connection with condensers.

A very important advantage of this sinusoidal current, is the fact that in its employment one may deal with elements as accurately known and capable of being as accurately dosed as in the use of the constant current. My apparatus is provided with a permanent magnet, so that the only element which it is necessary to determine is the rate of motion, which is easily ascertained by means of the indicator commonly employed for this purpose. In the apparatus employed by D'Arsonval the source of induction is an electro magnet and requires accordingly, a determination of the amount of current used to excite the magnet as well as the velocity of the apparatus. In this respect the sinusoidal current possesses an immense advantage over any form of faradic current.

The current produced by a faradic machine is subject to continual modifications from variation in the strength of the actuating battery, and in the adjustments of the rheotome, as is well shown by the tracings which I present with this paper. (Figs. 6 and 7.) I have made a large number of tracings of the currents produced by various forms of faradic apparatus and under various conditions, and have made some experimental attempts with a view of securing an improvement upon the ordinary form of induction apparatus, but I have thus far met with little encouragement of success. I believe the faradic machine is inherently faulty as a scientific electrical apparatus for medical purposes. The rheotome is a fatal element of weakness, changing the character of the current with the slightest modification and often, as every medical electrician knows, in a manner which, if the thing were intelligent, must be regarded as purely whimsical.

The invention of Faraday answered an excellent purpose during the embryonic period of electro-therapeutics, but now that we have learned the value of the milliampèremeter, the voltmeter, and the coulombmeter, and have acquired methods of precision in our electro-therapeutic procedures, the faradic battery, like the shocking machines of a half century ago, must give place to a more precise and more reliable instrument. The effort to overcome the weaknesses of the induction coil by the provision of some means of measuring the current obtained from it, is a task as useless as it is difficult, since nothing else than a graphic representation of the curves produced by it could enable a practitioner to regulate the machine twice alike, and such a method of regulation would be altogether too cumbersome and dangerous for practical use.

In the group of tracings shown herewith, which are intended to illustrate the effects of changes in the rheotome, no change whatever was made in the apparatus, except such as results from turning slightly in or out the adjusting screw of the rheotome. The increased or diminished amplitude of the curves produced are an indication of the changes in the potential current resulting from the changes referred to. There seems to be no method by which fluctuation in the character of the current can be remedied, and consequently the faradic machine, in the opinion of the writer must sooner or later be recognized as too rude an appliance to be of value in scientific electro-therapeutics, or, at least, to be of use only in a limited class of cases in which mere excitation is the object to be accomplished.

I do not profess to have yet made an exhaustive study of the subject to which this paper is devoted. My time is very fully occupied with professional duties, and it is only now and then that I can spend a few midnight hours in scientific researches. I shall continue the study of the subject, however, and from the indications obtained from some experiments which are not yet completed, I feel justified in promising some further, and perhaps more interesting results at some future time.

I present, in connection with this paper, a number of tracings which I have selected as typical, from a great number of tracings which I have made with my electrograph, and which I hope to have the pleasure of exhibiting in operation before the members of the Society at a convenient season.

(To be Continued.)

NECROLOGY.

R. S. Addison, M.D., of Chicago, February 21.

Austin Peggs, M.D. of Ossian, Iowa, January 29.

Jacob A. Fink, M.D. of Commerce, Mich., February 12, at Pontiac.

B. Brown Williams, M.D. of Meadville, Pa., February 15 aged 79 years.

J. M. Lathrop, M.D. of Dover, Ohio, February 9, of pneumonia.

H. C. Roberts, M.D. of Nashville, Tenn., February 17. Dr. Roberts was four years in the Confederate service during the war of the Rebellion.

Geo. W. Weeks, M.D. of New York City, February, 15, aged 29. He was a native of Norwalk, Conn., and was graduated at Bellevue Hospital Medical College.

Frederick K. Sprang, M.D., of Reading, Pa., died February 17, aged 57 years. He was a graduate of Jefferson Medical College of Philadelphia, in the class of 1860, and was a native of Oley, Berks County. He was a member of the Board of Medical Examiners of Berks County.

Amasa F. Kinne, M.D., who was born in Vermont in 1813, and moved to Ypsilanti in 1850, died in that town Feb. 14.

Oliver P. James, M.D., of Doylestown, Pa., died at that place Feb. 19. Dr. James served one term in the State Senate and was once nominated for Congress. He was president of Doylestown Borough Council for a number of years and treasurer of the Bucks County Fair. He was treasurer also of the local Masonic Lodge.

Benjamin S. Codman, M.D., of Boston, senior member of the firm of Codman, Shurtleff & Co., dealers in dental and surgical instruments, died Feb. 22, aged 78 years. He was graduated from the Harvard Medical School with honors. After leaving he practiced dentistry for some years, but about 1855 he, with A. M. Shurtleff and F. O. Whitney, established the firm which exists to-day.

Deaths of Eminent Medical Men.—Dr. John Burnley Walker, medical officer of health, to the combined districts of the Colne Valley, Yorkshire, England—Dr. Edward Strobl, Professor of Pharmacology and Hygiene in the University of Strassburg, aged 79.—Dr. Nebinger, Chief Surgeon to the Municipal Hospital, Bamberg—Dr. Arthur Ravara, Surgeon to the St. José Hospital, Lisbon, and to the King of Portugal, from the bursting of an aortic aneurism while he was examining a patient before performing ovariotomy; and Dr. Pierre Joseph von Benedan, who was Professor of Comparative Anatomy and Zoology, for more than sixty years in the University of Louvain, and one of the leading scientific lights of Belgium, aged 85 years.

Toland Jones, M.D., of London, Ohio, died February 18. Dr. Jones was born Jan. 10, 1820, being at the time of his decease a little over 74 years of age. He was educated at the Granville College and at the Ohio Medical College, Cincinnati. In 1862 he enlisted in Company A, One Hundred and Thirteenth O. V. I., of which he was made Captain. In 1864 at the battle of Kenesaw Mountain he was promoted to the colonelcy of his regiment, which belonged to the Second Brigade of the Second Division, Fourteenth Army Corps. He represented this district in the Ohio Senate in 1866-68. He has also been President of the Madison County Medical Society and in 1888 was President of the Central Ohio Medical Society. In the same year he was also presidential elector and was chosen to carry the Ohio returns to Washington. In 1889 he was appointed Surgeon General, with the rank of Brigadier, on the staff of Governor Foraker, to fill out the unexpired term of Adolphus E. Jones, deceased, of Cincinnati.

Martin Luther, M.D., one of the most eminent physicians in Pennsylvania, died at Reading, February 22, after an illness of three months with influenza and complications, aged 68 years. Dr. Luther was born March 16, 1826, at New Holland, Lancaster County, Pa. He was a son of Dr. John Luther of New Holland, for many years a prominent citizen and influential member of the Masonic fraternity. His grandfather was also a physician. Dr. Luther was educated in the best academies of Chester and Berks Counties, began the study of medicine in the office of his brother in New Holland, and was graduated from the Jefferson Medical College in 1848. For two years succeeding his graduation he practiced with his brother. In 1850 he removed to Reading, and soon after his location there he became one of its leading physicians. He served as physician to the Berks County Almshouse from 1853 to 1855, and the two succeeding years was physician to the county prison. In 1862 he was appointed Surgeon-in-Charge of the United States Army Hospital at Reading, and remained in that position until the Hospital was discontinued. In 1864 he served as Surgeon to the Board of Enrollment of the Eighth Congressional District, and acted in that capacity until the close of the war. He took a prominent part in establishing the Reading Dispensary in 1868, and was an influential member of the Berks County Medical Society, was for several years its President, and a number of times its delegate to the State and AMERICAN MEDICAL ASSOCIATION. Dr. Luther was a member of the Academy of Sciences of Philadelphia, and of the Reading Board of Health. He had an extensive practice and was a good surgeon. His ability was at all times recognized by the local courts, and his testimony in questions pertaining to his profession was always received with the most profound respect. He was a kind and careful physician, and to those who had his confidence he was the most companionable of men—a man of extensive reading, and a keen observer of men and affairs.

Dr. Luther was the youngest of three sons, all of whom had been noted for skill and ability, and in his death the genealogy of the family ceases—a family of doctors who had been prominent in Pennsylvania for over one hundred years.

Obed Harvey, M.D. of Galt, Sacramento County, Cal., died of apoplexy Jan. 17, 1894. He was born in Wayne County, N. Y., Sept. 7, 1825. He commenced the study of medicine with private tutors, attended lectures at Rush Medical College, Chicago, and at the Rock Island Medical College, Ill., from which he graduated in 1849. In 1850 he went to California, settling in Placerville, Eldorado County. For some years, in company with Dr. Asa Clark, he had charge of the county hospital there, and the two were the leading physicians of the county. In 1857 he went East, and was on the steamer, *Central America*, when she was wrecked in a gale and sank September 12, off Cape Hatteras. The Doctor was in the water from 8 o'clock at night until early morning, when a sailing vessel chancing to come upon the scene, he was rescued with the few who had survived. On reaching New York he was highly praised for the courage he had shown, and for the professional services and assistance he had given the passengers. In that city he continued the pursuit of the object of his visit, which was to improve his professional knowledge under the superior facilities to be found in a large city. For this purpose he connected himself with the Medical Department of the University of the City of New York, from which he received an honorary degree in March, 1858. He attended the annual meeting of the AMERICAN MEDICAL ASSOCIATION in 1858, as a delegate from the California State Medical Society, and is said to be its first representative in the National body. Returning to California, he resumed his practice at Placerville, investing his gains with sagacious forecast. About 1869 he removed to Sacramento County and laid out the town of Galt, where, and in the vicinity of which, he became the owner of a large estate, covering an area of between five and six square miles. He had a very extensive acquaintance with the distinguished men of the State; and his coöperation was frequently sought in projecting important public improvements and providing charitable institutions. He was many years ago a member of the Board of Directors of the State Insane Asylum at Stockton and was President of the Board at the time of his decease.

Dr. Harvey was a noticeable person among his fellow men. A figure of standard height and proportions, graceful and dignified in his bearing, a pleasing face, his was a comely and fitting physique for the intellectual strength, moral purity, and the humane disposition which characterized him. He was married in May, 1863, to Miss Susan M. Hall, an estimable lady of varied accomplishments and high social standing, who survives him. He leaves a son and daughter who are admired examples of a faultless heredity and innate refinement, crowned with a liberal education, recently completed in Eastern institutions. G. A. S.

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SATURDAY, MARCH 3, 1894.

THE PHONOGRAPH IN AUSCULTATION.

In that charming address written by the late AUSTIN FLINT, which, alas! he did not live to deliver ("Medicine of the Future") in writing of the increase of knowledge of the normal and abnormal actions taking place within the body, writes:

"It seems to me certain that the principles of the telephone will, by-and-by, be applied to intra-thoracic respiratory and heart sounds, so that they will be transmitted to the ear with more distinctness than they now are with the binaural stethoscope. The healthy and morbid sounds will then be so easily observed as to render the physical diagnosis of pulmonary affections in all cases a very simple problem. More than this, the clinical teacher may be able to demonstrate auscultatory signs to a class of medical students seated in the lecture room or hospital amphitheater. The same is to be said of the auscultation of the heart. . . . . I will go further, and say that intra-thoracic sounds may be transmitted from the patient to the physician. . . . . Again, and still further, the sounds from the chest of a patient may be phonographically registered, transported never so far, and made available after an indefinite period."

The distinguished author then mentions the bellows murmur over the fontanelles; those of the arteries and veins; the fœtal sounds; the intestinal borborygmi; the noises of gall stones; the musical tone of certain hydatids, to point out that there are more extended fields of auscultation than that of the thorax, and concludes:

"It can hardly seem an extravagance to predict, then, of the future development of auscultation to one who has listened with the aid of the microphone, to the footsteps of a fly."

The words of PROFESSOR FLINT are rapidly being realized through the marvelous developments of electricity, by the great EDISON. That wonderful man, whom the electric fluid seems almost to obey, as the genii of the lamp obeyed ALADDIN, has already developed the phonograph so that its resources are being utilized, and we have no doubt that fuller practice and experiment will diminish its defects, and fully establish its place as a valuable aid to diagnosis.

THE OLD-TIME TREATMENT OF STRICTURE OF THE URETHRA BY CAUSTICS.

Nowhere are the revolutionary possibilities of surgical practice more strikingly illustrated than in the comparison of bygone with present methods of treating urethral stricture. While in an old book store we recently found a book descriptive of a method of treating strictures by caustic applications entitled, "An Improved Method of Treating Strictures in the Urethra," by THOMAS WHATELY, M.R.C.S., etc., published in 1804. In view of the comment on the treatment of stricture by caustics appearing in the latest work on urethral stricture, in which the method is mentioned as a relic of surgical barbarity unworthy of serious attention, the pretensions of MR. WHATELY'S book are worthy of notice.

It would seem that this author had a long standing feud with the celebrated EVERARD HOME—the English surgeon—on the subject of the proper treatment of urethral stricture. MR. HOME argued that there was but one treatment for this condition, viz: Burning through the obstruction with lunar caustic, which *lapis infernalis* he fixed on the end of a bougie.[1] MR. WHATELY, on the other hand, put forward the application of pure caustic potash, "kali purum," as the ideal method. The champion of the "kali purum" naively insinuated that the only cases in which his method failed were such as had been through a course of HOME'S treatment. In speaking of cases in which he had attempted to perform a preliminary dilatation with small bougies he says: "Sometimes, indeed, there has been great difficulty; but the only cases where I have not been able to succeed or have met with uncommon difficulty, have been almost exclusively those which had previously been treated with caustic according to MR. HOME'S method."

To moderns the criticisms passed upon MR. HOME'S method would seem to be well founded, although savoring of a pot and kettle argument.

WHATELY'S method was as follows: Having moderately dilated the stricture by bougies, as a preliminary measure, a wax bougie was selected which would just pass the stricture. In the extremity of this soft bougie a bit of "kali purum" the size of a pin's head or smaller was embedded; the instrument was now greased with "hog's lard" and passed quickly down to the face of the stricture. By steady, intermittent and moderately firm pressure the formidable bougie was carried through the obstruction. This process was repeated every seven days, larger

[1] Mr. Home's book, published in 1795, was translated into the German in 1800.

and larger bougies being used, until the stricture was "cured." The operation was said to be quite innocuous. "In the greater number of cases in which the caustic is thus applied, even in the first instance it gives but little pain at the time of its application. A slight scalding in making water, and a trifling discharge during the first day or two, are, however, commonly produced by it."

WHATELY bases his opinion of the necessity for caustic applications largely upon the important observation that the urethra is not merely contracted, but is actually diseased at the point of stricture.

"I have observed in several cases of stricture that when the point of a bougie touches, though in a most gentle manner, the anterior part of the contraction, some drops of blood have immediately issued from the part. This circumstance favors the opinion that a stricture is not merely a contracted, but also a diseased portion of the urethra. A stricture being likewise according to MR. HUNTER, the hardest part of the urethra, and according to MR. HOME, a thickened contraction of the inner membrane, is another circumstance which corroborates the opinion above mentioned. Such an alteration from the natural state of the membrane could not be produced by a mere contraction of its fibers; the change must therefore be occasioned by disease."

One of the objections urged against lunar caustic is that the sloughs which it produces "not infrequently plug up the strictured orifice and produce suppression of the urine." HOME is quoted by WHATELY as observing a slough an inch in length in one of his own cases. WHATELY attributes bleeding during his operation "entirely to the bougie, and not to the caustic."

WHATELY'S own comments upon his method are quite sufficient to impress one with its barbarity. The modern surgeon will have difficulty in comprehending how men of ordinary intelligence and knowledge of pathology could fail to appreciate the barbarity of the caustic treatment of stricture. How WHATELY and HOME—both of whom were surgeons of repute and vast experience—could fail to do so is a mystery, yet at the same time a forcible illustration of the absurdity of the dogma of infallibility which makes us slaves to authorities. It will be remembered that that master mind, HUNTER, evolved a theory of "the venereal disease"—which embraced all forms of venereal infection,—based upon a single ill-starred clinical observation of the effects of inoculation of syphilis on his own person.

WHATELY says that, "by strictly observing these rules respecting the interval between each application of the caustic, we give time for the separation of the slough and the cicatrization of the sore (!!) occasioned by the action of the kali, and hereby the danger of hemorrhage is in a great degree prevented; a consequence, however, which we could not guard against, were the caustic to be applied upon a slough formed by a previous application of this powerful agent."

After thus blandly forgetting the mischievous effects of putting true cicatricial tissue where none previously existed in the urethra, and having confessed the grossest kind of malpractice, our author goes on to say that bougies should not be introduced between seances lest hemorrhage be caused thereby. According to WHATELY, the only way to curb the death dealing bougie and inhibit its properties of evil, was to arm it with a piece of caustic. He quotes MR. HOME as having had a case of perineal fistula in which the urine came away partly by the perineum and partly through the rectum. "In this case the caustic bougie passed into the rectum." He neglects to state what happened to the patient's rectum, but the bougie was rendered harmless by being tipped with caustic.

Our author, however, redeems himself somewhat by concluding his chapter on operative manipulations, by taking "some notice of the means to be employed for relieving suppression of urine should this occur from the use of caustic or any other cause."

A very interesting observation was made by WHATELY, viz.: Epididymitis occurred oftener after the passage of the ordinary bougie than after that armed with kali. The modern surgeon, with an appreciation of the antiseptic properties of caustic potash, can readily understand this observation. Like many others of his time, WHATELY came against the principles of wound-infection without understanding them.

In common with every hobbyist, WHATELY marshals a formidable array of successful cases in support of his method; these cases would look well if paralleled with some of our modern reports of "electrolysis in urethral stricture." On reflection we are glad that urethral defects due to malpractice can not be transmitted by heredity. A large portion of mankind might otherwise be compelled to seek methods of micturating other than *per vias naturales*. Taking one consideration with another, the lot of the urethra of a hundred years ago "was not a happy one." But after all, the errors of the old-time surgeons had a ring of honesty and true conviction that made their faults quite tolerable as compared with the mysterious ways of some modern surgical hobby riders. One can see at a glance what they intended and can judge of the merits of their methods by their published statistics. The modern originator of surgical procedures, however, has too often a way of reserving just enough of the details of his methods to necessitate referring our cases to him. He has a custom also of reporting a large number of cases of patients who live in the next county or just over the State line out of reach. Verily, the errors of the past generation of surgeons are of more value to surgical science than many of the alleged achievements of to-day.

THE LAW CREATING A MEDICAL COUNCIL AND MEDICAL EXAMINING BOARDS IN PENNSYLVANIA.

After ten years continuous agitation the Legislature of Pennsylvania passed a law establishing a Medical Council and three State Boards of Medical Examiners, May 18, 1893. Pennsylvania was behind many of her sister States, as far as medical legislation was concerned, but the law just enacted contains provisions which, if judiciously and energetically carried out, will exercise a greater influence on medical education in the United States than any legislation which has yet been accomplished. While it is true there are minor defects in the law, these can be overcome by intelligent administration. The Governor has recently appointed the members of the three State Boards of Medical Examiners as the law takes effect March 1, 1894.

The Act under which the appointments are made provides for the establishment of a Medical Council, consisting of the Lieutenant Governor, the Attorney General, the Secretary of Internal Affairs, the Superintendent of Public Instruction, the President of the State Board of Health and the Presidents of the three State Boards of Medical Examiners. The Boards of Examiners are appointed from physicians of ten years practice, seven from each of the following named Societies, viz: the State Medical Society, the "Homeopathic" State Medical Society, and the "Eclectic" State Medical Society. Each of the Boards must hold two or more stated or special meetings every year for the examination of all persons who from the first of next March propose to enter upon the practice of medicine in that State. The Boards are required to submit the questions proposed to be asked applicants to the Medical Council, and from these questions the Council will select the queries for each examination, except that in the departments of therapeutics, practice of medicine and materia medica, the questions shall be based upon the doctrines and teachings of the "school" selected by the candidate. After passing the examination before the proper Board the results are submitted to the Council, which having satisfied itself that the applicant is duly qualified for the practice of medicine, issues a license to practice, to the candidate, and a record is made. This record is open to inspection in the office of the Council, and, on presentation of the license to the Prothonotary of the county in which the physician desires to practice, he or she is entitled to registration in accordance with the provisions of the law regulating medical practice already in force.

Applicants who have received their medical degrees after July 1, 1894, must have studied medicine for at least three years in some legally incorporated medical college, and after July 1, 1895, must have pursued medical studies for at least four years, including three years attendance upon some legally constituted medical college.

Several of the States, as a qualification for examination, require attendance on three annual courses. These are Minnesota, North Dakota, Washington and New York. Therefore this requirement of four years' study goes farther than any direct legislative enactment that has yet been passed and sustains the position taken by the Illinois State Board of Health in July, 1887, in refusing to recognize the diplomas of any medical college, after the session of 1891 and 1892, which did not require three annual courses of lectures and four years of study.

A number of the leading schools have already required four annual courses of lectures; and with this additional incentive it is safe to assume that all the medical colleges in the United States, by the year 1900, then in existence will require four annual courses and thus remove, to a great extent, the stigma heretofore resting on medical education in the United States.

If the applicant fails in his first examination, he may be re-examined after six months have elapsed and within two years. Physicians licensed after examination by State Boards of Examiners or State Boards of Health of other States, where the standard of acquirements is substantially the same as that required in Pennsylvania shall receive a license from the authorities without further examination. This feature is now introduced for the first time in medical legislation in this country, and is eminently just and wise. The requirement of a fresh examination each time that a practitioner desires to take up his residence in another State would necessarily become oppressive and onerous.

The Act does not affect physicians now registered in their respective counties under the Act of 1881, who thus register before March 1, 1894, nor does it apply to physicians from other States or counties called to consult with registered physicians. This latter provision is also broader and more liberal than that which obtains in nearly all the other States.

It will be observed that the distinctive features of this law as compared with those of other States are the establishment of the Medical Council, which, however, corresponds in part to the Board of Regents of the University of the State of New York, and the recognition of licenses granted by similar bodies in other States. This legislation is sufficiently comprehensive to protect the public from professional incompetence, and encourage the attainment of the knowledge requisite, without being open to the criticism of being illiberal and exclusive.

DEAD DRUNK.

The death of JOHN MARKEY a few days ago in Chicago from a fractured skull, he having been run into

by a street car, and booked for drunkenness by the police, is another evidence of the stupidity of the average policeman, and the careless disregard for life that obtains in this country among police officers. An inquest was held. "The intelligent coroner's jury heard the testimony of the intelligent officers, and rendered the intelligent verdict that the death was the result of acute alcoholism." His wife was not satisfied, as she knew her husband was not a drinking man, and she induced the coroner to have a post-mortem made, when it was found that his skull was fractured. A second inquest was held, which resulted in a verdict in accordance with the facts.

A man is found in the streets unconscious, no matter whether it is due to apoplexy, fracture of the skull or any lesion of the brain; he is thrust into a cell to sleep off his supposed drunk (often to be found dead in the morning) or for the same reason not received at a hospital, when if he had been properly cared for his life might have been saved. In some cases, no doubt, there may have been evidence that the party had been drinking, and probably had received his injury while intoxicated, but this is no reason why he should be neglected. The police should be instructed, so that at least when in doubt a medical man be called to see the case. The judgment, "dead drunk," is too often literally true. Instances of this character have often occurred, and within the last six months twelve cases have been noted in different cities, and it is high time that something should be done to stop it. Unfortunately, the police are not alone in this disregard for life, as two months ago two ambulance surgeons of New York committed the same mistake—we might almost say the same crime.

CONSTITUTIONAL RIGHTS OF PERSONS CHARGED WITH INSANITY.

Attention has already several times been called, through the columns of the JOURNAL, to the fact that the Supreme Court of Minnesota has held to be unconstitutional certain sections of that State's insanity law enacted in 1893. There is, however, a very important principle involved in this decision which merits further notice, as being of universal application.

Every one has either known, or read, of cases where the greatest wrongs have been, intentionally or unintentionally, perpetrated, by the unscrupulous and wickedly designing, or criminally indifferent, upon persons charged with insanity. History is full of instances where it would seem as if any person was perfectly defenseless against the most manifestly trumped-up charges of insanity.

This Minnesota case, of State v. BILLINGS, better known as the "BLAISDELL Case," is not one of this sort, but it furnishes the opportunity for the court to declare that, while the State should take charge of such unfortunates as are dangerous to themselves and to others, not only for the safety of the public, but for their own amelioration, due regard must be had to the forms of law and to personal rights. To the person charged with being insane to a degree requiring the interposition of the authorities and the restraint provided for, there must be given notice of the proceeding, and also an opportunity to be heard in the tribunal which is to pass judgment upon his right to his personal liberty in the future. There must be a trial before judgment can be pronounced, and there can be no proper trial unless there is guaranteed the right to produce witnesses and to submit evidence.

Any method of procedure, which a legislature may, in the uncontrolled exercise of its power, see fit to enact, having for its purpose the deprivation of a person of his life, liberty or property, is in no sense the process of law designated and imperatively required by the Constitution. Any statute having for its object the deprivation of the liberty of a person can not be upheld, unless it absolutely secures to the person the right to have the tribunal proceed by "due process of law," which, as above intimated, requires notice, hearing and judgment.

Of the Minnesota statute held to be invalid, it is not necessary to say more than that it was so constructed that the opportunity to be heard in defense was not guaranteed to the person charged, and was not so framed as to compel a hearing before condemnation, or a trial, under the general forms of law, before judgment might be pronounced.

Another very remarkable thing about this BLAISDELL case, is that it was not until upon the rehearing of it, which was decided Jan. 25, 1894, that the court, or the parties, seemed to know of the existence of this now condemned law. On the first hearing, which culminated in an opinion handed down Dec. 13, 1893, the commitment of MRS. BLAISDELL was considered wholly with reference to the old law, and held illegal.

BASES FOR EXPERT OPINIONS.

The Supreme Court of Nebraska holds in the case of the Omaha & Republican Valley Railway Company v. Brady, decided Jan. 16, 1894, that the opinion of a medical expert may be based: 1, on his acquaintance with the party whose condition is under investigation; 2, upon a medical examination of him which he has made; or 3, upon a hypothetical case stated to the expert in court. Some latitude must necessarily be given in an examination of medical experts and in the propounding of hypothetical questions, the better to enable the jury to pass upon the question submitted to them. It is the privilege of counsel in such cases to assume, within the limits of the evidence, any state of facts which he claims the evidence justifies, and have the opinion of experts upon the facts thus assumed.

CORRESPONDENCE.

LETTER FROM EUROPE.

Major Girard, Surgeon U. S. Army, to Professor Senn.

No. I.

SEA VOYAGE—BREMEN—GÖTTINGEN— DR. HILDEBRANDT—PROFESSOR KOENIG AND THE GÖTTINGEN CLINIC—PROFESSOR ORTH.

GÖTTINGEN, Feb. 9, 1894.

Dear Dr. Senn:—In compliance with your request and the invitation of Dr. Hamilton, I will commence a series of letters, relating what, in my travels, I may find of interest to the profession. Owing to my appointment as delegate from the War Department to the International Congress at Rome, my professional tour in Germany has to be somewhat curtailed, but I hope to supplement this loss by an account of my experiences in the "Eternal City."

As a preface I desire to say that I do not expect or hope to compete with your inimitable style in the "Four Months Among the Surgeons of Europe." My account will also not be in chronological form, hence the dates of my visits and their durations will be omitted.

The passage in the steamer gave me an opportunity to test the efficacy of the treatment of naupathy recommended by Dr. Skinner in his excellent article in the *New York Medical Journal* of last December. I had provided myself with the necessary solutions of atropin and strychnia, and that of caffein. Unfortunately, I met a ship's surgeon who either was not, or did not want to be, a believer in any treatment for seasickness, and consequently I was not given the privilege of experimenting on the steerage passengers, but I had a number of personal friends in the first cabin, who gladly availed themselves of any means of escape from the horrible malady. Among them I noted particularly three very distinct cases: One where a lady, by means of the injections, was enabled to go to table, while she had before suffered from violent headache and intense nausea. The passage being very stormy, the treatment had to be continued almost daily. The other, a lady who had suffered from endless vomiting day and night for four days, was almost miraculously relieved by one injection of half a dose, and although she was not able to appear on deck until near the end of the voyage, could partake of her meals in her stateroom.

The third case, an elderly lady suffering from excruciating headache and vomiting up to hematemesis, after one injection was at once relieved.

I am sorry that I did not have a better opportunity of testing more fully this treatment, but with pleasure add this testimony to that of Dr. Skinner, holding out some hope to the sufferers on the sea.

Your introduction to Dr. D. Kulenkampff of Bremen, led to a very cordial reception. The Doctor took great pains to exhibit to me the various hospitals, many of them the outcome of private charity, of which Bremen may well be proud. The "Städtische Krankenhuastalt" especially is almost perfect in its appointments—great cubic capacity of beds, floors laid with linoleum or cement, direct and indirect heating, ventilation by expiration, wide porches, two detached disinfecting rooms—one by dry heat, the other by steam—detached, well ventilated and well appointed kitchen and storerooms, electric dynamos, etc. The operating room is tiled on the walls, the floors marble terrazo, such as the surgeons deemed a necessity a few years ago. This is by the surgeons themselves now considered a not indispensable luxury, which is replaced by thorough individual asepsis. The appliances for sterilization are complete.

In the other hospitals, the old methods of heating by means of large stoves and natural ventilation are mainly relied on.

On my arrival in Göttingen I was very kindly received by Dr. Hildebrandt, formerly first assistant to Prof. Koenig, and now one of the teachers of surgery in the University. He introduced me to the great surgeon (Koenig), whose name in Northern Germany is mentioned in the same breath with von Bergmann and von Billroth. Speaking of the latter, I learned yesterday with great regret that, after a brief illness, he had passed to the unknown country—a loss to surgery which you no doubt greatly regret.

A few notes from Prof. Koenig's clinic may be of interest. He presented a young man of anemic countenance suffering from tubercular synovitis of the knee-joint. The limb was somewhat atrophied. The circumference of the knee slightly enlarged, motion fair to about 35 degrees. I had learned in Bremen that a reaction had taken place in Germany with regard to operative procedures in tubercular joint diseases, and that the knife was rarely resorted to. I expected to see an injection of iodoform emulsion, but found that a reaction of the reaction had taken place in Prof. Koenig's clinic. He said, that while in children or wealthy people non-operative treatment might be justifiable, until indications for operation were absolute, in the working class, who expected to be fitted for bread-earning in the shortest possible time, such a procedure was not justifiable. He predicted that he would probaby not even find affection of the cartilage, but expected from the thickening of the synovial sac, extensive tubercular deposits in the same. As to the method of operation, flaps, etc., he said that as to eventual success they made no difference whatever. He chose Hahnemann's method of incision across the patella and division of it by the saw after application of the elastic bandage and Esmarch's tourniquet. He then very carefully dissected off the synovial sac, including the mucous bursa, removed with the saw the epiphyses, trimming off the edges with a small sharp knife, united the patella by means of a shoemaker's awl and catgut, and periosteal continued catgut suture, placed a drainage tube in either side of the joint and beside the extensor tendon, enveloped the whole in a wood wool dressing and then placed it on a posterior splint. After this the constricting band was removed. The operation took an hour.

The next operation was an amputation of the thigh for recurring tubercular disease, which originally appeared to have been started by an injury to the foot with eventual development of tubercular foci in the bones of the tarsus, then in both elbows, finally in the knee joint. The operation was performed after the clinic by one of the senior students under the direction of the Professor. Elevation of limb, elastic bandage and constrictor (which, by the way broke during the operation and had to be replaced without perceptible increase of flow of blood, owing to rapid pressure on femoral), flap. The periosteum was retracted, but no flap made or fastened. Single ligatures. One of these slipped off toward the end of the proceedings, showing the wisdom of your method of double ligatures.

The next operation was for epispadias, made by the Professor himself,—the second step in the procedure, the first having brought about closure of the canal. A circular flap around the opening, liberated to the bottom of the urethra was folded over a catheter and united in the fashion of the Lembert suture. The defect was covered by a flap brought down from above the urethra, presumably not encroaching upon the parts eventually covered with hair and the whole held in place with catgut stitches.

The operations were performed under chloroform, although since the last Congress of Surgeons, ether more and more takes its place, not with great willingness, how-

ever, on the part of the German surgeons. In the last case ether was used at first, but owing to spasmodic action of the abdomen, flooding the field of operation with urine, abandoned and replaced by chloroform, which speedily brought about an even narcosis.

A resection of the hip-joint—without chain saw—was done with great dispatch and knowledge of the landmarks used and was carried into the interior of the pelvis through the acetabulum to remove tubercular deposits.

As to Prof. Koenig, he is a man apparently of 60, with a determined face, but generally kindly manner.

The buildings of the clinics are all new, and in every respect up to modern views in such matters. None but cases useful for instruction are admitted, and the chiefs of the several clinics are autocrats in this question. Prof. Erb has charge of the internal clinic; Prof. Orth of the Pathological Institute, which is the roomiest, best adapted building of its kind I have ever seen. A new work by Prof. Orth's pen has just appeared on "Diagnostics based on Pathologic Changes." It fills a want. Prof. Rosenbach, a very urbane gentleman, the discoverer of staphylococcus and streptococcus, has charge of the Surgical Policlinic. I believe that the facilities of Göttingen for either study or post-graduate investigations are equal to any university, and the absence of distractions in the town should, it appears, lead to studious habits. I regretted, however, to find that the native students did not avail themselves as they should of the splendid opportunities offered them, and that so many empty seats must have a depressing effect on the enthusiasm of the teacher.

My next will be devoted to Wurzburg.

Sincerely yours, A. C. GIRARD.

"Superfluous Spectacles."

KEOKUK, IOWA, Feb. 24, 1894.

To the Editor:—Superfluous spectacles are those prescribed by incompetent persons. Who are they? Surely not the educated physician who, after years of preparation, drops into ophthalmology by a sort of natural affinity; surely not the man or woman, who, when examining the eye, sees not only an optical apparatus but a living being behind it. No. The incompetents are those half-hatched and abortive products ground out by the so-called "ophthalmic colleges." These "colleges" are engaged in manufacturing opticians out of jewelers and oculists out of jays. Six weeks' time suffices in either case to produce a diploma-bearing individual who goes forth to prey upon the credulity of the populace. These are the persons who are to blame for "superfluous spectacles."

Every educated physician engaged in ophthalmic practice, knows that many cases of asthenopia in which refractive error exists, are not cured by glasses. The glasses are blamed, the oculist denounced, and regular medicine is brought into disrepute, all because too much confidence has been placed in the curative power of the lenses. In these very cases, glasses are needed because of the existence of error. The fact that asthenopic symptoms are not relieved by lenses should not lead us to regard such lenses as "superfluous spectacles." Glasses will cure many strange symptoms—but they are not omnipotent. Often change of air, of occupation or the treatment of nasal disease; often the use of tonics and other constitutional treatment will be necessary. It is in such cases that the "eye oculist" of six weeks' preparation will fail.

What is the remedy? *Abolish the "Ophthalmic Colleges."* If they are valuable, why not establish rectal, genito-urinary, hepatic, stomachic and pancreatic colleges? Specialism in medicine has gone mad. JAMES MOORES BALL, M.D.

A Suggestion.

INDIANAPOLIS, IND., Feb. 15, 1894.

To the Editor:—Permit your correspondent to express the opinion that our JOURNAL might be more useful, more generally read and kept closer in touch with the general profession by having a department for "Gleanings From the Reports of Medical Societies."

To utilize this suggestion each society should elect or appoint a competent reporter or corresponding secretary, whose duty it should be to give a brief report of each paper read and case reported that the society deemed of sufficient importance to interest the general profession.

These short reports should be sent to the JOURNAL for the consideration of its editors who would doubtless be glad to give them to their readers, or such parts of them as they might think proper.

This plan would identify every society with the JOURNAL, and make the members of the different societies anxious to read what might be reported from their own organization, and the comments thereon, as well as the reports from other societies.

I hope this plan or some other, for the above reasons, will meet the approval of the JOURNAL and of the many intelligent and hard working local societies throughout the United States. JAMES W. HERVEY, M.D.

Idaho State Medical Society.

MOSCOW, IDAHO, Feb. 18, 1894.

To the Editor:—I notice in your roster of "State Medical Societies of America," that Idaho is omitted. We organized in September, 1893, *strictly in line* with the AMERICAN MEDICAL ASSOCIATION, as the Idaho State Medical Society. Our annual meeting is at Boise City September 5.

Officered as follows: W. W. Watkins, M.D., President, Moscow; C. L. Sweet, M.D., Boise City.

Very truly yours, W. W. WATKINS, M.D.

Medical Department University of Wooster.

CLEVELAND, OHIO, Feb. 19, 1894.

To the Editor:—Will you kindly correct a statement made in a recent issue of your JOURNAL, to the effect that Dr. F. C. Taylor was elected to the position of Secretary of our Faculty. Such is not the case. The writer is holding the position at the present time and has for some time previously. Very truly yours, H. W. ROGERS, M.D., Sec'y.

From Professor Osler.

BALTIMORE, MD., Feb. 20, 1894.

To the Editor:—For one, I fail to see anything *undignified* in the letter of Dr. S. Solis-Cohen, of which "Constancy" complains. It seemed to me admirable in every respect—frank, straightforward and to the point.

Yours truly, WM. OSLER.

Hay Fever.

ST. LOUIS, MO., February, 1894.

To the Editor:—I am specially interested in hay fever. Please inform me where I can get a list of resorts in the United States frequented by victims of that malady?

Respectfully, F. C. EWING, M.D.

Hypnotized.—Sandow, the strong man, whose muscular development was recently made the subject of an article in this JOURNAL by Dr. Lydston, has been successfully hypnotized in New York. While in that state it is said that he lifted a two-pound dumb bell with the utmost difficulty.

ASSOCIATION NEWS.

The Association Train will leave Chicago Monday, May 28, via Santa Fe R. R., Denver & Western, and Southern Pacific, for San Francisco via Denver, Colorado Springs, Leadville, Manitou, Glenwood Springs, Salt Lake, Ogden, Truckee and Sacramento. Returning, after the meeting, the train will pass through Sacramento and Northern California to Portland, thence east by way of the Northern Pacific R. R. to St. Paul. A stop over at Yellowstone National Park for those who desire it has been arranged, and it is understood that at several places on the journey there will be short stops. President Hibberd's party in a special car join the train at Chicago, and the St. Louis party are expected to join at Kansas City. From all points east and south, concentration on this train should be effected at Chicago and St. Louis.

Announcement.—The Committee of Arrangements has secured Odd Fellows Hall Building, corner Market and Seventh Streets for the ASSOCIATION meeting June 5, 1894. Assembly Hall, for the general meeting, has a seating capacity of 1,500; the twelve smaller halls, for Section work, range in capacity from 500 downward, with committee rooms adjacent.

The engagement carries three of these rooms on Monday for accommodation of associate organizations, as that of the editors, colleges, etc.

The banquet room on the ground floor 65x95 feet, will be devoted to exhibition purposes for which it is admirably adapted, and has been secured for the entire week, that exhibitors may have Monday in which to place their goods, and Saturday in which to remove them. Nearly half of the space is already taken, and others who desire to make a display of their goods under the most auspicious circumstances ever presented on the Pacific Coast, should lose no time in applying to the chairman for space.

Headquarters for the ASSOCIATION have been located at the Palace Hotel corner Market and New Montgomery Streets, only four blocks from the place of meeting. Here we have "Marble Hall," 36x40 feet as a registration room where work will begin on Monday, and "Parlor A" for Committee work. R. H. PLUMMER, Chairman.

San Francisco, Feb. 21, 1894.

Nebraska Excursion.—We observe that our Omaha brethren are being posted on the coming meeting of the ASSOCIATION. An excursion has been arranged from Omaha, by the editor of the *Clinic*, Dr. Wilkinson, who will speak of it in the next issue of his journal as follows. We hope that his party will join the regular train at Denver, so all may enter the Golden State together:

"The rates for the excursion will probably be made very low. They now are those of the Midwinter Fair, which will also then be in progress, and until July 1, and the special train of Pullman coaches to be directed at the will of the profession, whether desiring to go by way of Salt Lake City and return by way of a trip on the Pacific Ocean from San Francisco to Portland and from Portland back to the starting point, or vice versa is a consideration that a glance at the map will show compasses, in a general way, all points of interest, as only the Union Pacific can offer, in those expansive countries known as the 'Far West' and the 'Pacific Slope.'

"Arrangements will be effected by which many details of the trip may be made most convenient and interesting. The editor, who is to take charge of the excursion, will make use to this end of all suggestions sent to him.

"It is proposed that the train be directed first to Denver, in order that those desirous may see the city and also that this train may accommodate those having on other lines transportation as far as Colorado. The rates will be made proportionately less at this point.

"Concerning the AMERICAN MEDICAL ASSOCIATION: It is America's representative body of medical men. It is that society to which, practically, all the societies of the Union can and do center, because its voice is thoroughly democratic.

"This voice is the Nominating Committee, composed of one member from each State represented at the yearly meeting; this member of each State is chosen at the meeting by the members of his State present. This is the balance-wheel of the democracy of the AMERICAN MEDICAL ASSOCIATION.

"As to the meetings they are thoroughly cosmopolitan, from the immaculate and more formal evening dress, after the going down of the sun, of the men who hail from the 'cities," to the conventional garment of the physician everywhere, all are on the same footing at all times, whether at the receptions in banquet halls or at work through the days of the four-days session in the many different sections.

"To become a member of the AMERICAN MEDICAL ASSOCIATION is a very simple matter. Have the indorsement of the president or secretary of any society of which you are a member in good standing (State, district, etc.), and which considers itself in affiliation with your State Medical Society or for that matter, with the AMERICAN MEDICAL ASSOCIATION. (This affiliation means to have subscribed to the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION.)

"Send this indorsement together with $5 to Dr. Richard J. Dunglison, Treasurer, box 1274, Philadelphia, Pa. In this way you become privileged in all the functions of the ASSOCIATION, together with becoming a subscriber to the JOURNAL of the ASSOCIATION, which is to-day in the front rank of American medical weeklies.

"One more suggestion. If you desire a vote on the important issues (the Code is one of them) at the next meeting it is as well at this time that you join a State medical society and go as a delegate.

"Full particulars are given in this issue of the *Clinic* as to membership of the Nebraska State Medical Society and we hope next issue to present the routine in full of the Iowa State Medical Society.

"You will be given official papers as a delegate to the AMERICAN MEDICAL ASSOCIATION at and after the time of meeting of the State societies in May, if you will furnish the respective secretaries of these societies with the request at any time between now and the time of the annual meeting.

"So far as we know the following societies in Iowa and Nebraska are in affiliation with the AMERICAN MEDICAL ASSOCIATION:

"Nebraska State Medical Society, Iowa State Medical Society, Medical Society of the Missouri Valley, Tri-State Medical Society, Omaha Medical Society, Richardson County (Neb.) Medical Society, Northwestern Medical Society, Loup Valley (Neb.) District Medical Association, Central Nebraska Medical Society, Lincoln (Neb.) Medical Society, Otoe County (Neb.) Medical Association, Cherokee (Ia.) Medical Association, Sioux City (Ia.) Medical Society, Johnson County (Neb.) Medical Society, Western Association of Gynecologists and Obstetricians, State Line Medical Society, Cedar Valley (Ia.) Medical Society, Des Moines County (Ia.) Medical Society, Dubuque (Ia.) Medical Society, Washington County (Ia.) Medical Society, Warren County (Ia.) Medical Society, Wapello County (Ia.) Medical Society, Society of Physicians and Surgeons of Muscatine County (Ia.), Shelby County (Ia.) Medical Society, Scott County (Ia.) Medical Society, Ringgold County (Ia.) Medical Society, Polk County (Ia.) Medical Society, North Iowa Medical Society, Muscatine (Ia.) Medical Society, Mitchen County (Ia.) Medical Society, Medical Association of Northwestern Iowa, Austin Flint Medical Society (Ia.), Botna Valley (Ia.) Medical Society, Bremer County (Ia.) Medical Society, Buchanan County (Ia.) Medical Society, Capital District Medical Society (Ia.), Central District Medical Association (Ia.), Clinton County (Ia.) Medical Society, Dallas County (Ia.) Medical Society Delaware County (Ia.) Medical Society, Des Moines Valley Medical Association (Ia.), Eastern Iowa Medical Association, Fayette (Ia.) Medical Society, Fort Dodge (Ia.) District Medical Society, Guthrie (Ia.) Medical Society, Jackson County (Ia.) Medical Society, Jefferson County (Ia.) Medical Society, Johnson County (Ia.) Medical Society, Keokuk County (Ia.) Medical Society, Louisa County (Ia.) Medical Society, Madison County (Ia.) Medical Society, Marion County (Ia.) Medical Society, Julien Medical and Surgical Society, (Ia.) Maple Valley Medical Association (Ia.)."—*Omaha Clinic.*

SOCIETY NEWS.

The Cheshire County (N. H.) Medical Society met at Hinsdale February 9. Dr. Herbert K. Faulkner read a paper on "Intestinal Obstruction," and Dr. Gardner C. Hill read a paper on "Hematuria."

The Orange Mountain (N. J.) Medical Society held a regular meeting February 16, on invitation of Dr. W. D. Robinson. About forty members were present. The paper of the evening was read by the retiring President, Dr. Carl Buttner, his subject being "Home Treatment for Consumption."

New York State Medical Society.—At the last annual meeting of the New York State Medical Society, the following officers were elected: President, George H. Fox, M.D., New York City; Vice-President, Frank Low, M.D., Pulaski; Secretary, Frederick C. Curtis, Albany; Treasurer, Chas. H. Porter, Albany.

Rockford, Ill., Medical Society.—The Rockford, Ill., Medical Society was formed Feb. 12, 1894, and the following officers were elected for the first year: President, G. S. Wing; Vice-President, T. N. Miller; Secretary, J. E. Allaben.

The regular meetings of the Society will be on the second Tuesday evening of each month. Those present at the first meeting were Drs. Henry Richings, A. N. Comings, T. H. Culhane, F. M. Hill, Starke, Fringer, Miller, Allaben, Tibbets and Winn.

The Northampton County, (Pa.) Medical Society held its bi-monthly meeting at Bethlehem, Pa., February 16. These members attended: Dr. C. H. Ott of Chapman's; Dr. W. H. Seip of Bath; Drs. Chas. McIntire, David Engleman, Amos Seip, E. M. Green and W. B. Erdman of Easton; Drs. B. P. Breinig, E. H. Schnabel, W. L. Estes, John H. Wilson, H. C. Masland and H. Threlkeld-Edwards of the Bethlehems. Two papers were read at the session: Dr. McIntire on "How to Prevent Blindness," and Dr. Edwards on "Serum Therapeutics." The annual meeting will be held at the United States Hotel in Easton, in April.

The Monthly Meeting of the London, Ont., Medical Association was held on February 19, in the Medical School. A large number of members were present, and the proceedings were of much interest to the profession. The Association recognize the great evil that has wounded the practice of medicine in the way of lodge and contract practice, and propose to invoke the aid of the Ontario Medical Council to remedy the evil. Dr. Butler read a valuable paper on "Acute Inflammation of the Middle Ear," which is prevalent as a result of la grippe. Dr. Drake presented the notes of a very unusual and interesting case of rupture of the heart, and exhibited the specimen. The papers were discussed at length by many of the members.

Medical Club of Philadelphia.—The Medical Club of Philadelphia held its annual meeting at the Hotel Metropole February 15. Dr. H. G. McCormick, President of the State Medical Society, was the special guest of the Club at the banquet which followed the business meeting.

The following officers were elected: President, J. H. W. Chestnut; First Vice-President, Prof. Peter D. Keyser; Second Vice-President, Prof. Hobart A. Hare; Secretary, Lemuel J. Deal; Treasurer, Roland G. Curtin.

Board of Governors: J. M. Barton, Frank Fisher, Prof. William Pepper, Prof. Charles K. Mills, A. H. Hulshizer.

Additional Members of the Executive Committee: James VanBuskirk, Prof. E. E. Montgomery, M.D., Prof. James C. Wilson, M.D., L. Webster Fox and T. Chalmers Fulton.

The addresses referred principally to the new law creating a State Medical Council and Boards of Medical Examiners, towards the passage of which the untiring efforts of Dr. McCormick largely contributed. Among those who spoke were Dr. John H. Rauch of Chicago, who for so many years was President and Secretary of the State Board of Health of Illinois, which is in fact the Medical Examining Board of that State; Dr. William B. Newell of the New Jersey State Medical Examining Board; Dr. Hobart Hare of the Jefferson Medical School; Dr. Ernest L. Laplace of the Medico-Chirurgical College; Dr. Charles K. Mills of the Policlinic; Dr. Horatio C. Wood of the University of Pennsylvania, and Dr. John B. Roberts of Woman's Medical College. The speakers were introduced by the President, Dr. J. H. W. Chestnut, to whose indefatigable efforts the Club owes its existence. There were present about one hundred of the most prominent physicians of Philadelphia and other parts of the State, among whom may be named as members of the newly created Board of Examiners, Dr. W. S. Foster of Pittsburg, and Drs. Henry Beates and A. H. Hulshizer of Philadelphia. The affair passed off with much éclat and was greatly enjoyed by the participants.

Medical Society of the State of Pennsylvania.—Committee on Scientific Business. At its last meeting the Medical Society of the State of Pennsylvania appointed—under the provisions of a by-law proposed at Harrisburg and adopted at Williamsport—a Committee on Scientific Business, "to secure scientific papers and to provide scientific discussions for each annual meeting, and to coöperate with the Committee of Arrangements and Credentials in arranging the program." The members of this Committee are Drs. Dulles of Philadelphia; Gorgas of Harrisburg; LeMoyne of Pittsburg; Tyson of Philadelphia; and Towler of Marienville. The object of this change in the law is to have a permanent Committee which, becoming familiar with the subject, shall find it easier to secure good scientific work than is possible for a committee that is appointed new every year.

This Committee on Scientific Business is working in conjunction with the Committee of Arrangements, of which Dr. E. E. Montgomery is Chairman, and will coöperate with it in arranging the program.

The Committee hopes that each member of the State Society will aid it in attempting to make the meetings of the Society of greater scientific importance than they have been in the past. To this end the Committee will welcome suggestions from any member of the Society and especially, at this time, offers of contributions to the work of the next meeting at Gettysburg, May 15 to 18. It is desired that there should be as many brief, concise, practical papers as possible, and it is proposed to have a discussion on tuberculosis, devoting the morning to "Medical Tuberculosis," and the afternoon to "Surgical Tuberculosis."

Any communication from members of the Society in regard to the work of the Committee will be welcomed by it.

Members of the Society desiring to read papers, or to take part in the discussion on tuberculosis, will please notify the Chairman of the Committee, Dr. Charles W. Dulles, 4101 Walnut Street, Philadelphia.

BOOK NOTICES.

Antiseptic Therapeutics. By E. TROUESSART, M.D. Translated from the French by E. P. HURD, M.D. Two Vols. Paper. Detroit: Geo. S. Davis. 1893. Price, 50 cents.

This is one of the most timely books of the year, and will be welcomed by all who wish to practice medicine according to the modern theories of bacteriology. Whether this newer practice will stand the test of time or not, it must be confessed that our therapeutics has not, up to this time, kept pace with the histologic knowledge.

We give, as a sample, the therapeutics of typhoid fever, which, according to our author (pages 234 and 235) is probably produced by the bacillus typhosus of Eberth:

"There are few diseases in which vigorous intestinal antisepsis is more plainly suggested by reason of the ulcerations which are seated in the walls of the intestine.

"According to Bouchard, there are four indications to fulfill: General antisepsis; intestinal antisepsis; antipyretic medication; and lastly, regimen. He begins by a saline purgative; then gives calomel in the dose of 40 centigrams (6 grains) a day in twenty doses, for four days, taking care to avoid salivation. He gives quinin only when the temperature exceeds 104 degrees F. in the morning and 105 degrees in the evening; then he gives 2 grams (30 grains) daily during the first and second week, then 1½ grams during the third; then 1 gram only, taking care not to give another dose until after seventy-two hours. General baths at 38 degrees C. (100 degrees F.), cooled by degrees down to 30

degrees C. (86 degrees F.) and repeated eight times in the twenty-four hours, are only contra indicated when there is intestinal hemorrhage or pulmonary hepatization. Beef peptones for nourishment, and glycerin (six to seven ounces a day). Vegetable acids under the form of lemon-juice.

For intestinal antisepsis, Bouchard prefers naphthol, α, which he administers under the following form:

"R. Naphthol α . . . . . .
Salicylate of bismuth $\hat{a}\hat{a}$ . . . . . 5 gm.
"M. Div. in chart No. X. Sig: Take one powder every hour.

"Benzo-naphthol, recently introduced into therapeutics, may be substituted with advantage for naphthol, especially if the kidneys functionate badly. In the latter case it is well to avoid the salicylate of bismuth."

While there are yet many vacant places, enough is given in this book to show the great advances made in therapeutics based on antiseptic medication.

Atlas of Clinical Medicine. By BYRON BRAMWELL, M.D., Assistant Physician to the Edinburgh Royal Infirmary. Volume II. Part III. Edinburgh: T. and A. Constable. University Press. 1893.

The third part of Volume II of this valuable clinical periodical, with finely executed plates illustrative of the text, has just been issued. The articles are: Exophthalmic Goitre: the clinical investigation of cases of exophthalmic goitre; Acromegaly: case of acromegaly in a giantess; the clinical investigation of cases of acromegaly; General Exfoliate Epidemic Dermatitis; Unilateral Hypertrophy of the Face.

There is an extra plate entitled "Old Age," which shows senile changes in the head and face in a very natural manner.

The number contains an index, title-pages and table of contents of the second volume. The high standard of this excellent work continues to be maintained.

MISCELLANY.

Dr. J. H. Cleaver, of Council Bluffs, Iowa, has been nominated for Mayor by the republicans of that city.

The Medical Department of Laval University, Montreal, has received a donation of $3,000 from Rev. Abbe Colin. The sum named is to provide certain necessary scientific apparatus.

Dr. Adolph Dusterhoff, has left to the Berlin University 100,000 marks, the interest of which will be awarded twice a year to the most diligent student in the Medical Department.

New York Academy of Medicine.—Dr. Mary Putnam Jacobi has been elected chairman of the section on nervous diseases by the New York Academy of Medicine.

Lewis Balch, M.D., who for the last seven years has been Secretary of the New York State Board of Health, has announced his intention to resign at the next meeting of the Board.

Dr. Livingston of Bennettsville, N. Y., has built up an extensive practice, notwithstanding that he has been deaf and dumb from the age of three years up to three years ago.

Died from Glanders.—Mrs. Sophie Bersford, died at San Francisco, February 20, from glanders, which she took from a horse purchased from a dealer, who it is said knew that the animal was diseased at the time of sale.

Savannah Medical Journal.—The Savannah Medical Journal Publishing Company announce a new monthly medical journal to be especially devoted to the interests of the medical profession of the Gulf States.

Veterinary Surgeons.—The annual meeting of the Illinois State Veterinary Association was held at Springfield, February 21, with a full attendance. Papers upon important subjects were read by prominent members of the Association.

Typhoid Fever.—We have several letters in regard to the paper of Dr. Woodbridge which recently appeared in the JOURNAL on the abortive treatment of typhoid fever. The writers animadvert on the fact that the treatment has not been given in detail. We have in hand a supplementary article from Dr. Woodbridge, which will appear next week and give his treatment in full.

The Practitioners' Club of Chicago met at the Great Northern February 26. Professor N. Senn presided. The topic for discussion was the "Medical Department of the Newberry Library." Dr. Ephraim Ingals gave an account of the beginnings of the Library. Dr. Wire gave a detailed statement of its present condition, and Dr. Senn told the story of the procurement and development of the Senn collection. Dr. George W. Webster spoke of the library of the AMERICAN MEDICAL ASSOCIATION. Short speeches were made by Drs. Hollister, Andrews and Hamilton.

Quarantine at Fernandina.—A meeting of the State Board of Health was held in Jacksonville February 23. The meeting was called for the purpose of considering the erection of a quarantine station at Fernandina. The members of the Board are: William B. Henderson, President, Tampa; Dr. Joseph Y. Porter, Secretary and Health Officer, Key West; James P. Taliaferro of Jacksonville and Dr. Warren R. Anderson of Pensacola.

St. Louis Medical College Changes.—The Faculty of the College of Physicians and Surgeons has accepted the resignation of Dr. Barnes, who for many years has been Dean of the College, and the vacancy has been filled by the appointment of Dr. J. A. Close. Dr. George H. Thompson has been elected Secretary to fill the vacancy caused by the resignation of Dr. G. W. Cole several weeks ago. Changes in the staff of the College were recently made, when Dr. J. W. Smith, Assistant to the Professor of Surgery, was dismissed by the Dean and Dr. J. D. Nifong appointed in his place.

Consumption an Infectious Disease.—A committee of the Philadelphia Pathological Society, consisting of Drs. John Packard, W. E. Hughes, G. G. Davis, F. Eshner, W. L. Coplin, John H. Musser and Drs. Ball and Allyn, appeared before the Board of Health February 20, and presented the following action taken by the Society relative to the infectious nature of tuberculosis:

"WHEREAS, In the opinion of the Pathological Society tuberculosis is an infectious disease, and the Society recognizes the fact that the most frequent source of infection is the human subject affected with the disease, and that there are many practical obstacles to be overcome before a generally accepted system of preventive measures can be established; therefore, be it

"*Resolved*, That in the opinion of this Society the line of action to be followed by the health authorities should be one of education and preparation of the people for future action, and that the first step in this direction should take the form of frequent and well propagated announcements to the effect that the health authorities are prepared to undertake, upon request of the attending physician, with the sanction of the family, the disinfection of premises vacated by tuberculous patients."

After the subject had been discussed by the committee, and the members of the Board, the matter was referred to the Sanitary Committee.

The Medical Editors Travel.—February 15 the medical editors who are traveling through the South, passed through Raleigh. They stopped last night at Southern Pines and will then proceed to Charlotte. From Charlotte

they will return to Monroe and go to Atlanta. From Atlanta they will return to Wilmington, arriving there on the morning of the 20th. That evening at 6 o'clock they will arrive here and spend the night, leaving at 11.25 A.M. the morning of the 21st for Portsmouth, en route northward.

The party is composed of the following persons:

Dr. W. C. Wile, *New England Medical Monthly*, Mrs. Wile and daughter, Danbury, Conn.; Dr. E. C. Angell, of the *Sanitarian*, Brooklyn, N. Y.; Dr. Ferdinand King, *Polyclinic*, New York City; Clark Bell, Esq., *Medico-Legal Journal*, New York City; Dr. T. D. Crothers, *Journal of Inebriety*, Hartford, Conn.; Dr. T. D. Wood, *Brooklyn Medical and Surgical Journal*, Brooklyn, N. Y.; Dr. Howard Van Rensselaer, *Medical Annals*, Albany, N. Y.; Dr. W. Blair Stewart, *Medical Bulletin*, Philadelphia, Pa.; Mr. Griffing and wife, representing the *Connecticut Press;* Mr. R. G. S. McNeille, *Bridgeport Standard;* Dr. Geo. L. Porter, the *Times and Reporter*, Philadelphia; Dr. S. G. S. Stewart and wife, *New York Medical Times*.

The party is under the care of Mr. Geo. W. Taylor, passenger agent of the Seaboard Air Line, and of Captain Whistnant and Mr. Patrick.

Dr. Cheatham and Miss Cheatham of Henderson, N. C., are at present with the party.—*Raleigh, N. C., Chronicle*, February 16.

Hospital Notes.

New Hospital.—Ottumwa, Iowa, is to have a hospital.

The N. Y. State Hospital at Rochester was damaged by fire February 20. The loss is about $15,000.

Dubuque, Iowa, is to have an Emergency and Contagious Disease Hospital. It will be managed by the City Board of Health and the county authorities.

St. Mary's Hospital at Evansville.—The new St. Mary's Hospital at Evansville, Ind., was formally opened February 15. The new building occupies an entire block, and it is said that nearly 10,000 visitors inspected it at the opening.

The Missouri, Kansas and Texas Railroad Company are to build a branch hospital "somewhere in Texas." The good people of Fort Worth are bestirring themselves to secure its establishment in that place.

C. E. Riggs, M.D., Inspector of the Fergus Falls (Minn.) Hospital for the Insane has submitted his report to the Board, which among other recommendations includes one for the erection of a separate building for the confinement of the criminal insane.

Dr. B. G. Maercklein, a Milwaukee dentist, has purchased from Drs. William H. Earles and Walter H. Neilson a third interest in Trinity Hospital, with a view to establishing a medical and dental school. A new building will be erected at a cost of $75,000.

Mr. Guthman of Youngstown, Ohio, has devised a plan to endow the hospital of that city with $100,000. The plan is for one hundred men to take out insurance policies in the sum of $1,000 each, on the twenty years endowment plan. In this way, the $100,000 endowment can be obtained for the hospital and the donors not miss it. Only persons who can well afford to do so will be asked to contribute to the success of the scheme by taking policies.

Woman's Charity Club Hospital.—In 1893 the Woman's Charity Club of Boston, organized a hospital at Roxbury on Parker Hill. Matters have gone smoothly until recently when somebody proposed that medical students should be allowed admission to the hospital for purposes of instruction. Then the trouble commenced, and the new regulation was the subject of many ups and downs, but finally the Club voted, no, with such emphasis that the statues of Molly Pitcher and Priscilla Alden that ought to be over the door of the Council Chamber were observed to turn pale with fright.

Hospital Saturday and Sunday Association.—The thirteenth annual meeting of the Hospital Saturday and Sunday Association of Brooklyn was held last night at the residence of the President, William G. Low.

The most interesting report was that from the collections of Hospital Saturday and Sunday which came on the last Saturday and Sunday of the year. Despite the hard times, the collections this year are over five hundred dollars more than last year. The total amounts to $6,468. The following officers were unanimously reëlected for the ensuing year: William G. Low, President; David M. Stone, Vice-President; the Rev. Dr. C. Cuthbert Hall, Secretary; R. J. Kimball, Treasurer.

THE PUBLIC SERVICES.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from February 17, 1894, to February 23, 1894.

First Lieut. BENJAMIN L. TEN EYCK, Asst. Surgeon U. S. A., will report in person to Col. JOSEPH C. BAILY, Asst. Surgeon General, President of the examining board appointed to meet at Ft. Sam Houston, Texas, at such time as he may be required by the board, for examination as to his fitness for promotion.

A board of medical officers, to consist of: Col. CHARLES H. ALDEN, Asst. Surgeon General; Lieut. Col. WILLIAM H. FORWOOD, Deputy Surgeon General; Major CHARLES SMART, Surgeon; Major WALTER REED, Surgeon; Capt. JAMES C. MERRILL, Asst. Surgeon, is constituted to meet at the Army Medical Museum Building, Washington, D. C., on the 12th day of March, 1894, at 10 A.M., for the examination of candidates for admission to the Medical Corps of the Army.

The National Guard —The Eighth Regiment Ohio National Guards Hospital Corps will be located at Canton, Ohio. Surgeon A. V. Smith is in command of the new corps.

Marine Hospital Changes. Official list of changes of stations and duties of medical officers of the U. S. Marine Hospital Service, for the four weeks ended February 17, 1894.

Surgeon R. D. MURRAY, to proceed to Key West, Fla., for special duty, Jan. 26, 1894.

Surgeon P. H. BAILHACHE, granted leave of absence for twenty days, Feb. 5, 1894.

Surgeon GEORGE PURVIANCE, detailed as chairman, Board of Examiners, Feb. 12, 1894.

Surgeon G. W. STONER, detailed as member, Board of Examiners, Feb. 12, 1894.

Surgeon H. R. CARTER, to report at Bureau for temporary duty, Feb. 2, 1894. To proceed to Brunswick, Ga., Quarantine as Inspector, Feb. 6, 1894. Detailed as recorder, Board of Examiners, Feb. 12, 1894.

P. A. Surgeon J. H. WHITE, granted leave of absence for seven days, Feb. 17, 1894.

P. A. Surgeon P. M. CARRINGTON, granted leave of absence for thirty days, Feb. 19, 1894.

P. A. Surgeon W. D. BRATTON, granted leave of absence for thirty days, Jan. 20, 1894.

P. A. Surgeon W. J. PETTUS, granted leave of absence for thirty days, Jan. 30, 1894.

P. A. Surgeon G. T. VAUGHAN, to report to the Secretary of the Treasury for special duty, Jan. 26, 1894.

Asst. Surgeon G. B. YOUNG, ordered to examination for promotion, Feb. 14, 1894.

Asst. Surgeon W. G. STIMPSON, ordered to examination for promotion, Feb. 14, 1894.

Asst. Surgeon B. W. BROWN, ordered to examination for promotion, Feb. 14, 1894.

Asst. Surgeon M. J. ROSENAU, granted leave of absence for thirty days, Feb. 26, 1894.

Asst. Surgeon L. E. COFER, to proceed to Mobile, Ala., for duty, Jan. 30, 1894.

Asst. Surgeon J. M. EAGER, granted leave of absence for four days, Jan. 30, 1894.

Asst. Surgeon RUPERT BLUE, granted leave of absence for eight days, Jan. 26, 1894.

Asst. Surgeon SEATON NORMAN, ordered to examination for promotion, Feb. 14, 1894.

Asst. Surgeon EMIL PROCHAZKA, to proceed to New York City for duty, Jan. 24, 1894. To proceed to Buffalo, N. Y., for temporary duty, Feb. 2, 1894.

LETTERS RECEIVED.

(**A**) Allen, D. P., Cleveland, Ohio; Atkinson, Wm. B., Philadelphia, Pa.; Appleton, D. & Co., New York, N. Y.; Ayers, D., Syracuse, N. Y.

(**B**) Burnett, D. L., So. Royalton, Vt.; Ball, Jas. Moores, Keokuk, Iowa.

(**C**) Cutter, E., & J. A., New York, N. Y.; Connor, Leartus, Detroit, Mich.; Collins, T. S., Globe, Arizona; Chisholm, Harold, Chattanooga, Tenn.; Canfield, W. B., Baltimore, Md.

(**D**) Danforth, L. L., New York, N. Y.; Dunglison, R. J., (3) Philadelphia, Pa.

(**E**) Ewing, F. C., St. Louis, Mo.; Englemann, Rosa, Chicago, Ill.

(**F**) Fehr, Julius, Hoboken, N. J.; Fletcher, C. A., Kalamazoo, Mich.

(**G**) Garcelon, Alonzo, Lewiston, Me.; Gray, L. C., Brooklyn, N. Y.

(**H**) Hofheimer, J. A., New York, N. Y.; Haldeustein, J., New York, N. Y.; Henderson, N. H., Chicago, Ill.; Hopkins, J. G., Thomasville, Ga.; Hollister, Mary C., Chicago, Ill.

(**I**) Ingals, E. Fletcher, Chicago, Ill.

(**K**) Keiper, Geo. S., Lafayette, Ind.

(**L**) Larkin & Scheffer, St. Louis, Mo.; Lanphear, E., Kansas City, Mo.

(**M**) Martin, Jeffry, Clinton, Iowa; McMurtry, L. S., Louisville, Ky.; Montgomery, E. E., Philadelphia, Pa.; Medical Review Ass'n, St. Louis, Mo.; McSwain, I. A., Paris, Tenn.; Middleton, Wm. D., Davenport, Iowa.

(**P**) Probst, C. O., Columbus, Ohio; Pantagraph Printing & Stationery Co., Bloomington, Ill.; Phenix, N. J., Alvin, Texas; Parkinson, W. B., Logan, Utah.

(**R**) Rauch, J. H., Lebanon, Pa.

(**S**) St. Peter State Hospital, St. Peter, Minn.; Sutton, R. S., Allegheny, Pa.; Steebert, G. E., New York, N. Y.; Shurley, E. L., Detroit, Mich.; Shurtleff, G. A., Stockton, Cal.

(**T**) The Tilden Company, New Lebanon, N. Y.; Towler, S. S., Marienville, Pa.; The Maltine Manufacturing Co., New York, N. Y.; Turner, T. J., Wayland, Mich.

(**W**) Wells, E. F., Chicago, Ill.; Woodbridge, J. B., Youngstown, Ohio.